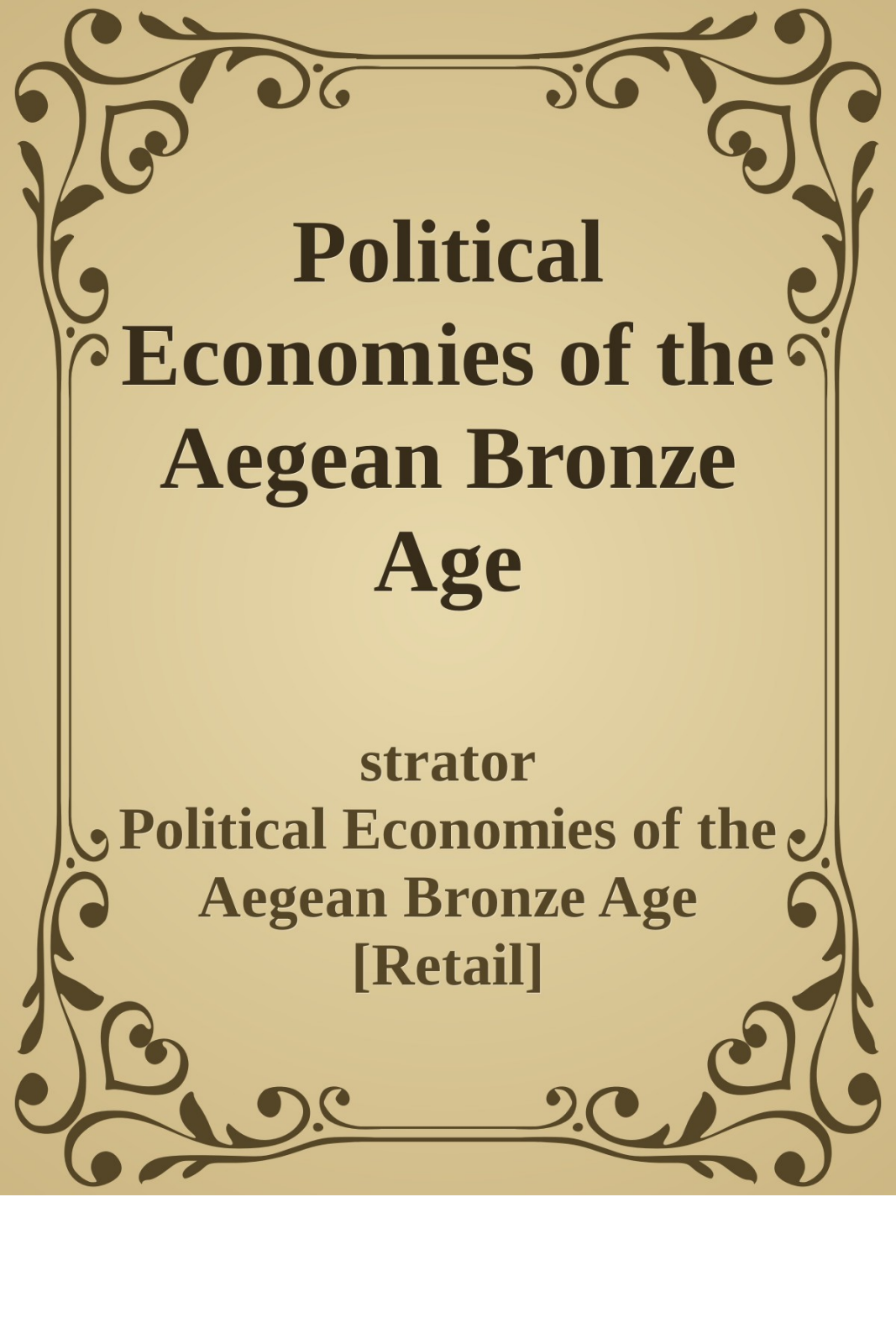


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Political Economies of the Aegean Bronze Age

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Political Economies of the Aegean Bronze Age



edited by
Daniel J. Pullen

POLITICAL ECONOMIES OF THE AEGEAN BRONZE AGE

Papers from the Langford Conference,
Florida State University, Tallahassee,
22–24 February 2007

Edited by

Daniel J. Pullen

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Preface

The contributions to this volume were originally delivered at the Spring 2007 Langford Conference entitled “Political Economies of the Aegean Bronze Age,” held at the Florida State University in Tallahassee 22–24 February 2007. Papers were circulated in advance, and a response prepared by James Wright. Subsequently the papers and the response were revised for publication (the contribution by Donald Haggis, “Stability and the State: A Diachronic Perspective on Pre-State Society in the Aegean” was not submitted for publication here). I would like to thank the authors for their timely responses and an anonymous reviewer for comments. Bill Parkinson, Dimitri Nakassis, and Michael Galaty also provided comments and editorial assistance.

I would like to thank the George and Marian Langford Family Endowment in the Department of Classics at the Florida State University for funding the conference, Patrick Byrne and Jeff Bray for helping make the conference a smooth-sailing operation, and Kevin Wohlgemuth for providing editorial assistance. My colleague Bill Parkinson, formerly of the Department of Anthropology at Florida State and now at the Field Museum of Chicago, deserves gratitude for letting me bounce ideas off him over many lunches and emails and for co-hosting the conference. I would also like to thank my colleagues and graduate students in the Classics and Anthropology Departments who pitched in and helped in many ways to make the conference the success that it was.

Daniel J. Pullen
March 2009

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Abstract

This volume brings together an international group of researchers to address how Mycenaean and Minoan states controlled the economy. The contributions, originally delivered at the 2007 Langford Conference at the Florida State University, examine the political economies of state (and pre-state) entities within the Aegean Bronze Age, including the issues of:

- centralization and multiple scales of production, distribution, and consumption within a polity
- importance of extraregional trade
- craft specialization
- role of non-elite institutions
- temporal/diachronic variation within regions
- “Aegean” political economy as a monolithic process
- political economy before the emergence of the palaces

The contributors address these issues from an explicitly comparative perspective, both within Minoan or Mycenaean contexts and across Minoan and Mycenaean contexts. The conclusions reached in this volume shed new light on the essential differences between and among “Minoan” and “Mycenaean” states through their political economies.

INTRODUCTION

Daniel J. Pullen

Goals of the Volume

The issues of state formation and the nature of states in the Aegean have emerged as major concerns in recent Aegean scholarship (Parkinson and Galaty 2007). The political economies of these states likewise have seen increased attention by Aegean scholars. Aegean states have always been recognized as secondary states, on the periphery of primary states in Egypt and the Near East, but until recently have received little attention outside the world of Aegean studies. The study of Aegean polities by Aegeanists all too often has focused on specific culture-historical patterns, has utilized an approach that obscures variation (*e.g.*, assuming identical processes at work at the different centers), or favors one type of evidence (such as Linear B tablets) over others. This is also the case when considering the political economies of these Aegean Bronze Age polities (a notable exception being the papers in Voutsaki and Killen 2001a). The present volume brings together contributions from a number of scholars from North America and Europe who employ a comparative approach in examining the political economies in the Aegean Bronze Age in light of current archaeological theory. We hope that this set of papers, by focusing on the wealth of variability in the data-rich Aegean, will expand our understanding of how states and their political economies in general, and Aegean states and their political economies in specific, work.

The Spring 2007 Langford Conference was formulated to compare various state (and pre-state) entities within the Aegean from the viewpoint of political economy. Issues addressed include:

- the degree of centralization (versus autonomy) of production, distribution, and consumption within different polities
- the importance of extra-regional trade (items)
- the role of craft specialization (variation in, complexity of)
- the role of non-elite institutions compared to elite/governing institutions
- scales of production, distribution, and consumption in polities, from the household level to macroregional
- temporal/diachronic variation within regions (*i.e.*, do various Mycenaean polities function in a similar manner? do various Minoan polities function in a similar manner?)
- an assessment of “Aegean” political economy as a monolithic process
- the nature of political economy before the emergence of the palaces.

Participants in the conference addressed these issues from an explicitly comparative perspective, both within Minoan or Mycenaean contexts and across Minoan and Mycenaean contexts. The chapters in this volume shed new light on the essential differences between and among “Minoan” and “Mycenaean” states through the political economies of the

different regions. Despite the great overlap in material culture between Minoan societies on the one hand and Mycenaean societies on the other, there is growing recognition that there are fundamental differences between these two regions of the Aegean. The presence of “palaces” in both has obscured to some degree our ability to distinguish between the two regions. Still, given the historical overlap it is important to continue to take a comparative approach in order to ascertain what, for instance, is uniquely Mycenaean in the societies of the mainland and the degree of Minoan influence there might have been.

The chapters included here build upon the 1999 Cambridge conference on *Economy and Politics in the Mycenaean Palace States*, organized by Sofia Voutsaki and John Killen, and published in 2001 (Voutsaki and Killen 2001a). That conference was concerned with the “extent of central palace control over the economy in Mycenaean polities” (Voutsaki and Killen 2001b, 1) in three areas: agriculture, craft production, and trade, both internal and external. The 2007 Langford conference was organized to expand upon the earlier Cambridge conference by considering prepalatial and non-palatial settings, and to provide comparisons of Mycenaean with Minoan palatial settings. The 2007 Langford conference was designed to complement two related events also held during Spring 2007. The first was a workshop at the January 2007 Archaeological Institute of America meetings, chaired by Michael Galaty and M. Kathryn Brown, that explicitly compared aspects of Mycenaean state organization with Mayan state organization in order to generate cross-cultural comparisons useful to scholars of both regions. The School for Advanced Research Advanced Seminar in Santa Fe in March 2007, organized by William Parkinson and Michael Galaty, examined the dynamics of changing social interactions between pre-state and state societies of the Aegean Bronze Age and their adjacent contemporaries in the eastern Mediterranean and southeastern Europe (Parkinson and Galaty in press). The 2007 Langford Conference, from which the chapters in this volume derive, focused specifically on intra-Aegean comparisons of political economies, encompassing both Mycenaean and Minoan polities as well as their “pre-state” ancestors.

Political Economies of the Aegean Bronze Age

Identifying a single, simple definition of any complex phenomenon such as “political economy” that a majority of scholars would agree upon is, as we all know, difficult. Nevertheless, Gary Feinman’s attempt is, I believe, one that many can accept: the political economy is the system whereby elements of the economic system (that is production, distribution, and consumption) “transcend the bounds of individual domestic units... [and] through a diverse set of means ... support integrative and/or hierarchical institutions or relationships” (Feinman 2004, 2). In the Aegean Bronze Age, the political economy has often been conceived of in more narrow terms, generally as the methods by which the (palatial) elites control the economic system, chiefly through centralization of economic activities. The participants in the 2007 Langford conference challenged these definitions, by looking at how various Minoan and Mycenaean societies, as well as the societies of their predecessors, were organized, how the economies of various societies functioned within and without palatial controls. The contributors to this volume contend that nature of these controls is highly variable and that these controls should be measured not just on the single axis of centralization, as is the usual approach.

Foremost of the assumptions expressed in this volume is the understanding that one cannot speak of *the* political economy in the Aegean Bronze Age. Rather there is growing recognition of much variation in the Aegean, not just between the palatial societies of

Minoan Crete and Mycenaean mainland, but among the various polities and states within each region. Parkinson and Galaty (2007) have argued for the essential differences between Minoan states and Mycenaean states to lie in part in their underlying organization into “corporate” (Minoan) or “network” (Mycenaean) types of political organization (following the work of Blanton *et al.* 1996). From this fundamental difference Parkinson and Galaty argue that one can begin to more appropriately model the nature of the political economies of the Minoan states as distinct from those of the Mycenaean states (see also Galaty and Parkinson 2007).

One objective of some of the authors in this volume is to explore the nature of prepalatial (pre-state) organization and how the later Palatial period political economies may have been influenced by institutions and processes adopted in earlier times. This approach has great potential to elucidate the degree of Minoan influence on Mycenaean states, and to draw further attention to the essential differences between Minoan states and Mycenaean ones. Wright (1995), based in part on Kilian (1988), has shown how Mycenaean chiefdoms (if that is the appropriate categorization of early Mycenaean political organization) emulated Minoan institutions as part of the large-scale appropriation of foreign ideas by the Mycenaean elites in their competitive development (see also Voutsaki 1995). This is not to say that Mycenaean polities adopted Minoan institutions wholesale; rather, the Mycenaean elites were selective in what was appropriated. We can point to the large quantity of Minoan symbolism in Mycenaean religion, but at the same time contrast this with the seemingly very different political organizations of the Mycenaeans, centered at least at Pylos around the *wanax*. Thus if we can identify particular institutions or organizing principles at work in early Mycenaean (prepalatial) contexts, or even earlier, that continue into the Mycenaean palatial period and that are not recognized in Minoan palatial contexts, then we can model those aspects of Mycenaean political and economic organization as being independent of Minoan influence.

There is also growing recognition of regional variability, among either the individual Minoan states or the individual Mycenaean states (for a study of north-central Crete, see Adams 2006). The peer-polity model of Renfrew and Cherry (1986), while extremely useful for modeling how the various Minoan or Mycenaean states can be so similar culturally, was not designed to model the variability among the constituent states. One of the principal criticisms by archaeologists of the text-based approach to the study of Mycenaean political economies is the wholesale extension of the palatial economy reconstructed for the palace at Pylos to other Mycenaean centers that lack the extensive documentation found in the Linear B archives at Pylos. Recent detailed architectural studies of the physical entities of the palaces at Pylos (Nelson 2001) and Mycenae (Fitzsimons 2006) have shown the very different developmental histories of the two structures, and one is left with the question of how different were the societies behind these two different developmental histories. From the aspect of regional settlement patterns we have a very different picture of Messenia compared to the Argolid. In the former we have a pattern of regional dominance throughout the Late Helladic period by one center, Pylos, with only slight indication of neighboring, competitive sites (Bennet 2007a). In the Argolid, by contrast, though Mycenae is usually thought to be the largest urban center, it exists within a short distance of a number of other substantial centers such as Tiryns, Midea, and Argos – sites that at one time rivaled Mycenae in wealth and population (Voutsaki 1995). Thus one wonders what might be different about political organization – and the political economy – in Messenia compared to that in the Argolid.

The extent to which all parts of Crete or all parts of southern Greece were incorporated

into these states, that is how far-reaching was the palatial control of the territories “assigned” to them through spatial modeling of the states in the peer-polity model (or through other models), is directly related to the notion of the degree of palatial control of the political economy. In a recent review of the economy in the prehistoric Aegean that combines both textual and archaeological approaches, Bennet (2007) cautions against assuming similarities in organization and operation among the Aegean Bronze Age palaces. While Bennet does recognize the “para-palatial” economy (as he terms it: Bennet 2007, 190), his emphasis is on how the palatial elites control economic affairs in a Mycenaean palatial polity; at the same time, he does not explore in much detail the organization of the state in Mycenaean or Minoan contexts. An understanding of the role of the palatial elite in a Mycenaean political economy is undoubtedly of major importance for our understanding of a Mycenaean political economy as a whole, but the authors in this volume recognize that there are multiple institutions at work within a political economy, or within a state in general, and not all necessarily in harmony with each other. Certain components of Mycenaean economies are not attested in the Linear B tablets at all, for instance that dealing with chipped and ground stone tools (Parkinson 2007), and are presumed to be outside of the control by the palaces – but is this a deliberate “choice” by the palatial elite? Some institutions that are archaeologically well attested, such as the procurement of luxury materials and finished goods from sources outside of the Aegean, are barely, if at all, attested in the Linear B sources, yet are presumed to be under palatial control because of their exoticism or their consumption (see Burns 1999).

Not only must we take into account institutions, regions, and people outside the direct control of the palatial elites, but we must also consider the processes at work within and among the constituent components. What is needed is re-evaluation of some of our key concepts such as “redistribution”¹ or “exchange,” utilizing not only a diachronic approach but also a comparative or cross-cultural approach to understand the variability within these concepts. One promising avenue of inquiry is that of “agency” or looking at the roles of individuals operating within the political economy. Nakassis, for instance, has argued (2006) that in the Linear B tablets from Pylos one can identify multiple roles for particular individuals, some roles directly under palatial control, others less so. This approach has the potential to add a dynamic quality to our understanding of political economies that is often missing in our “categorization” approach to the topic.

Contributions of this Volume

Perhaps one of the most important changes in the study of political economies in the Aegean has been the recognition of the importance of general models to allow cross-cultural comparison. Aegean archaeologists have favored the particular (we do love our catalogues!), and have eschewed the general. General models, often developed in other cultural and regional contexts, have the fault of masking variability, but they also have the advantage of allowing comparisons. At one level, the modeling of Aegean states as “secondary” masks the differences between Mycenaean and Minoan states, but this characterization also allows the Aegean situation to be compared to similar situations of secondary state formation elsewhere. These comparisons have led to more sophisticated models, such as those recently discussed by Parkinson and Galaty (2007) in the *American Anthropologist*, where differences between Mycenaean states on the one hand and Minoan states on the other can be identified (see also Galaty and Parkinson 2007). A number of the papers in this volume attempt to model political economies in the Aegean such that

similarities and differences between Mycenaean and Minoan states on the one hand, and variability among Mycenaean states or among Minoan states can be explored. Variability between regions can be as useful for explaining the functioning of Aegean states as delineating the similarities. William Parkinson's contribution to this volume (chapter 2) assesses the value of general and specific models for examining political economies, by focusing on trade and interaction at scales ranging from the individual polity to the greater eastern Mediterranean world in the Bronze Age.

One of the major contributions of many of the chapters in this volume is an appreciation of the *scale* of analysis as distinct from the scale of the observed phenomenon – while the palace is undoubtedly a major factor in the economy of the Late Bronze Age Mycenaean states, it perhaps has been over-emphasized due to the nature of the Linear B evidence from Pylos and Knossos (see, for example, Bennet 2007b). Even our basic socio-economic unit, the “household” is subjected to critique. Jan Driessen (chapter 3) challenges the very notion of individual households as the domestic unit, instead drawing attention to some of the corporate group features of Minoan society, and Ilse Schoep (chapter 4) examines the idea of single, palace-based elites within each Minoan polity. William Parkinson (chapter 2) looks at both intra- and inter-regional exchange at varying scales from that of the individual polity to the larger world of the eastern Mediterranean. And Cheryl Ward (chapter 8) compares the capabilities of shipping throughout the Bronze Age to provide an assessment of the scale and intensity of inter-regional trade, particularly between Egypt and the Aegean. Thus the contributors directly engage the issue of scale at many levels, from the concept of a monolithic Aegean, Minoan, or Mycenaean political economy, to the supposed stable sub-units of economic production and social reproduction.

Redistribution has been a key element in the discussion of Aegean political economies, and we should remember that this often means Mycenaean palatial economies. This is due to the presence of Linear B tablets, and the conclusion that since the palace was managing large quantities of agricultural goods, raw materials, labor, and finished products, it must have been *the* center of the economy. Since the work of Polanyi (1960) and Finley (1957) in the 1950s (shortly after the recognition of Linear B as an archaic form of Greek) that characterized Mycenaean palace economies as primarily redistributive of staple goods on a large scale and Renfrew's (1972) *Emergence of Civilisation* where he refined the role of redistribution as one primarily of geographic movement of staple commodities, our ideas of redistribution have become much more sophisticated, and notions of wealth-financing and staple-financing (D'Altroy and Earle 1985) now dominate our discussions of the how the Mycenaean palace economies functioned. Dimitri Nakassis (chapter 7), though, considers the dichotomy between staple-finance and wealth-finance too stark and simplistic, and suggests that instead we should model state finance as a continuum defined by axes of material and symbolic capital. His analysis of the Linear B textual evidence, utilizing a quantified approach not always attested in Linear B studies, indicates that production controlled by the palace at Pylos was geared to feasting rather than the production of fungible wealth items. He concludes that the palatial economy at Pylos was oriented towards the direct accumulation of symbolic capital, thus making it a prestige economy using both “staple” and “wealth” goods.

One of the major points of contention in the discussion of political economies in the Aegean is the degree of control by the “palace,” the extent of the non- or para-palatial economy, and the contrast between palatial and non-palatial sectors of the economy. These interrelated issues of the degree of centralization of the economy and the extent and nature of the non-palatial economy were one of the themes at the Langford Conference in 2007 as

it had been at the earlier Cambridge conference (Voutsaki and Killen 2001b). A number of the participants at the Langford conference explicitly and extensively addressed this issue, not only for the Mycenaean palace period but also in Minoan Crete in the Palatial as well as Prepalatial periods. Ilse Schoep (chapter 4) examines the construction of elite ideology in Protopalatial Crete, especially outside the palaces themselves, utilizing the notion of “high culture” (Baines and Yoffee 1998, 2000), here designated as “elite culture.” She demonstrates that there was great variability across different scales (from the settlement to the entire island) and among the different “polities.” At Malia, production of fine tableware and other prestige items such as high-quality sealstones found in the main buildings at Quartier Mu seems to have been taken place in workshops not controlled by the Quartier Mu elite; rather, the workshops at Quartier Mu seem to have been engaged in the production of utilitarian items not prestige items. Schoep suggests that there were different “levels” of elite inclusiveness, what she terms the “inner” elite controlling the production (and consumption?) of prestige items and a “sub-elite” that consumed some of the prestige items but did not participate in their production. These different types of elites then contribute to the variability seen within a settlement such as Malia.

Jan Driessen (chapter 3) argues for a very different type of social organization for Crete – one in which “houses,” in the sense of a corporate residence-based groups, functioned as one of the primary units of production and consumption in Minoan society, perhaps as far back as the Neolithic. Driessen suggests that these *Houses* (he suggests Shakespeare’s Houses of Capulets and Montagues, or the French fashion *Maison* as a parallel) placed emphasis on a physical estate composed of architectural structures, land, and material goods that were passed on from one generation to another. For Driessen, understanding the basis of social relations among the inhabitants of Minoan Crete is essential before attempting to discern the features of the political economy. Some of the clues to identifying these *Houses* are the relatively large size (120 to 200 m²) of the structures identified as residential units supposedly occupied by a nuclear family, the continuity of building locations, layouts, and size within settlements through time, and the group (not individual) orientation of house tombs and tholos tombs. An important contribution by Driessen to the question of variability in the Aegean is the suggestion that during the LM II–III period at Knossos the (Mycenaean?) administration actively discouraged the *Houses*, as seen in the progressively smaller architectural units at that site.

Sofia Voutsaki contrasts the political economy of the palatial period in the Argive Plain with that of what she calls the “kinship economy” characteristic of the beginning of the Middle Helladic period, not just to look at the differences but in an attempt to explain the *process* of centralization that took place. She argues for a structural transformation from a kin-based society in the earlier Middle Helladic period to one characterized by status distinctions held by individuals and social groups, in other words, a shift from a corporate organization to a more networked organization. She provides an explanation whereby Mycenaean manipulated networks of alliances and diplomacy, reinforced by exchange of prestige items, and violence (or, as she suggests, threats of violence) into its dominating position. Voutsaki sees kinship and descent retaining importance for the Mycenaeans of the palatial period as it helped to enforce centralization of control of certain aspects of the political economy by the palatial elite. Nakassis (chapter 7), utilizing earlier work of his (Nakassis 2006), reminds us that many individuals at Pylos were engaged in multiple economic activities, some directly controlled by the palace, some indirectly, and some not at all.

Centralized control is not all pervasive. Thomas Tartaron (chapter 9) shows that in the

Corinthia two different trajectories emerged. In the northern Corinthia a heterarchical social and economic structure, developed over millennia through a stable settlement system, precluded the emergence of centralized control or the easy integration of this region into Mycenae's political orbit. Along the Saronic Gulf, local elites were players in the competition between the peer polities of Mycenae and Kolonna until eventually Mycenae absorbed this region into its political orbit. Such sophisticated analysis is the result of refining general, comparative models of state formation, peer-polity competition, and the role of prestige items in elite expression.

Variability among Mycenaean polities in the political economy is addressed head-on by Michael Galaty (chapter 12), who contrasts systems of ceramic production among the Mycenaean polities of Mycenae and Pylos, and Minoan Crete. He argues that Pylos, in large part because it had only recently formed an integrated state, had not yet effectively developed systems of wealth finance; this is similar to Nakassis' contribution (chapter 7) in that the categories of staple and wealth finance are examined for how they worked at a regional level. Mycenae, on the other hand, had developed such systems, perhaps from the early Mycenaean period (*i.e.*, the Shaft Grave Period). Galaty points to the vastly different scales of distribution of ceramics between the two, where the products of Mycenae (and Berbati) were exported all over the Eastern Mediterranean, whereas Pylian products apparently rarely left Messenia.

The paper by Peter Day, Maria Relaki, and Simona Todaro (chapter 11) shows that in Crete there was a number of distinct ceramic production centers in the Prepalatial period, but that no individual or groups would have been able to appropriate this production for purposes of self-aggrandization. Rather, consumption of ceramics (and other products) was geared to collective practices such as mortuary rituals. Joanne Murphy (chapter 6) explicitly explores these mortuary and other rituals and their role in the political economies of Pre- and Protopalatial Knossos and Phaistos. She finds differences between Phaistos, where there is little evidence for ritual activity, and Knossos where there is much more such evidence.

William Parkinson (chapter 2) and Cheryl Ward (chapter 8) both address "exchange" in its broadest sense. Parkinson confronts the issue of the scale of analysis in examining social interaction, in both geographic and social terms. He shows that by taking a multi-scalar approach, variability within the Aegean becomes more apparent. General models such as world-systems frameworks and peer-polity interaction can go only so far and, Parkinson argues, inappropriate application of such models not only cause the models to lose explanatory power (*e.g.*, world-systems theory which was developed to explain relationships between capitalist nation states and less developed regions) but also in the end do not explain much. Parkinson wants us to negotiate between general models, useful for comparisons among states and different regional trajectories, and specific models developed to explain particular geographical and chronological situations.

Access to prestige goods is a fundamental component of many studies of Aegean political economies, as a number of contributors to this volume have shown. Prestige goods can be produced locally or regionally (though not always under centralized, palatial control, as Galaty shows). But acquisition of prestige goods through long distance trade is also often emphasized. Cheryl Ward's contribution (chapter 8) is a reminder of the capabilities, scale, and intensity of long distance trade in the Aegean and Mediterranean. She contrasts the presence of exotic goods in Aegean contexts, where these items are assumed to be indicators of high status, with the rather modest status of Aegean imports into Egypt (granted that the latter is often ceramics, and so the question arises of whether it was the container or the contents that was exchanged).

What about production and consumption outside the palace? Kim Shelton (chapter 10) presents data from her on-going excavations at the Petsas House outside the citadel of Mycenae. The Petsas house was actively engaged in ceramic production, and the intriguing find of Linear B tablets in a LH IIIA2 context, currently the earliest on the mainland, raises questions of palatial control. This would fit with Galaty's suggestion of palatial control of ceramic production and distribution at Mycenae, but not to the same extent at Pylos. At the same time the Canaanite jars and fragmentary Egyptian faience plaque with cartouche of Amenhotep III would suggest that the occupants of Petsas House were part of the elite engaged in long distance trade, or at least the recipients of the benefits of such trade.

James Wright (chapter 13) offers a well-considered response to the proceedings, and this provides an appropriate conclusion to this volume. In it he touches upon a number of the themes considered above, focusing on how archaeologists, especially those working in the Aegean, utilize models in explaining phenomena including political economies. For Wright, the issue of scale is very important, whether it is the scale of analysis or the scale of the observed phenomenon. And to paraphrase Wright's conclusion, the few examples of pristine states, and their political economies, are fleeting, whereas all that comes after, albeit "secondary," is "most everything when it comes to recovering and writing history." We believe this volume contributes to this recovery and writing of the history of political economies of the Aegean Bronze Age.

Note

See, for example, the papers at the recent colloquium on redistribution in Aegean states held at the 2009 Archaeological Institute of America meetings in Philadelphia, now being prepared for publication under the editorship of Michael Galaty, Dimitri Nakassis, and William Parkinson.

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BEYOND THE PEER: SOCIAL INTERACTION AND POLITICAL EVOLUTION IN THE BRONZE AGE AEGEAN

William A. Parkinson

Introduction

“... the Polanyi approach of characterizing certain economies as ‘redistributive’ or ‘market’ is therefore less fruitful than an approach that accepts the presence of a variety of exchange strategies and seeks to unravel the relationships among them” (Berdan 1989, 106)

This article explores exchange and interaction at several different geographic and social scales – between the Bronze Age states of the Aegean and their neighbors, between different Minoan and Mycenaean polities, and within individual Minoan and Mycenaean polities. I explore two data sets that provide information about the nature of social interaction that occurred at these different social and geographic scales. On the one hand, I discuss the direct material evidence for long-distance exchange between the Aegean, Anatolia, the Near East, Egypt, Mesopotamia, and Italy, much of which has been catalogued by Eric Cline (1994). Then I examine the distribution of Melian obsidian throughout the Aegean region and within specific polities.

The distribution of items of long-distance trade within the Aegean can be used to model how the Aegean fit in the circum-Mediterranean exchange sphere during the late Bronze Age. But this same information also can be used to explore variability within and between Minoan and Mycenaean polities. The items of long-distance exchange that were imported into the Aegean region during the Late Bronze Age were primarily prestige goods manufactured on exotic raw materials in far away lands that arrived in the Aegean in relatively low frequencies, providing a glimpse into those aspects of the political economy that were concerned with demonstrating political and economic status and power through access and control of long-distance exchange (Burns 1999; Voutsaki 2001).

By contrast, obsidian was a raw material commonly used for the production of chipped stone tools throughout the Aegean (Torrence 1986). The obsidian sources on the island of Melos had been exploited since the end of the Pleistocene, and obsidian blades and flakes are ubiquitous on Bronze Age sites throughout the Aegean (Cherry and Parkinson 2003). Although the production of pressure-flaked blades was a skilled, if not specialized, craft (Runnels 1985), the widespread distribution of the material suggests that the elite did not seek to control access to the sources or the production and distribution of the products created from the raw material (Torrence 1984). As such, the analysis of obsidian provides a perspective into the more mundane aspects of the of Minoan and Mycenaean political economies – those aspects that were more concerned with the day-to-day activities of farming, herding, and craft production than with demonstrating prestige (Kardulias 1992, 1999a; Kardulias and Runnels 1995; Parkinson 2007).

This article seeks to make two main points. The first is that any attempt at modeling social interaction in the Aegean Bronze Age – or anywhere else, for that matter – needs to

incorporate different geographic and social scales of analysis (see Parkinson 2006a). Analyses that focus only on the evidence for long-distance interaction, or only on the evidence for local interaction, will show only part of the puzzle. The role of long-distance exchange within a political economy can be better understood if it is compared to patterns of regional and local interaction, and vice-versa. This approach to analyzing social interaction at multiple scales yields models that outline more precisely the nature of social interaction and integration within prehistoric political economies (see Kardulias 1999b; Neitzel 1999). And this, in turn, permits more accurate comparisons to be made between different prehistoric state societies – not only between Minoan and Mycenaean polities, but also between the Aegean states and other archaic states.

The second point is that there was a great deal of variability in systems of exchange and interaction within the Bronze Age Aegean. Patterns of long-distance exchange varied not only geographically – between Crete and the Greek Mainland – but also temporally, suggesting that the role of long-distance exchange within the political economy of different Minoan and Mycenaean states changed over time. By contrast, the production and distribution of obsidian blades – on the Greek mainland at least – suggests that this aspect of the political economy was organized similarly in different areas despite the incorporation of those regions into different Mycenaean polities. Some evidence suggests that the production and distribution of obsidian blades may have been organized differently on Crete throughout the Bronze Age.

This study reinforces recent arguments that emphasize the differences in strategies that were employed in different Minoan and Mycenaean polities (Knappett 1999; Knappett and Schoep 2000; Relaki 2004; Schoep 1999; Schoep and Knappett 2004), as well as those that emphasize long-term temporal variability in the political and economic organization of ancient states (for example, Blanton *et al.* 1996; Marcus 1993, 1998). I argue it is important to negotiate between two different kinds of models in our study of the ancient past. On the one hand, we try to generate specific models that seek to describe the organization of specific polities and their relationships to each other. On the other hand, we also need to work with more general models that use defined criteria to group specific models into types that can be compared in a cross-cultural framework. When specific and general models are applied at multiple social scales they are more helpful at identifying patterns of similarity and variability within different societies.

Modeling Interaction in Prehistoric Societies

This article explores the evidence for interaction at three different geographic and social scales – at the macro-regional scale, between the polities in the Aegean and their neighbors in the circum-Mediterranean region; at the regional scale, between different Minoan and Mycenaean polities within the Aegean; and at the local scale, within specific polities.

The term *interaction* as it is used in archaeology refers to a wide variety of different social processes and seldom is explicitly defined. I model social organization along two separate but intertwined analytical dimensions – units of integration and degrees of interaction. In keeping with the way these terms traditionally have been used in anthropology (for example, Steward 1951), I restrict the term integration to refer to processes that incorporate individuals into specific organizational units. Interaction, on the other hand, refers to a more diffuse process that operates between these units. In this sense, societies can be envisioned as integrating into various units – households, villages, polities, *etc.* – and interaction can be measured between different units at different scales. Smaller

units of integration presuppose increased interaction (see Parkinson 2002, 2006b, 4). The methodological challenge with regards to archaeology is to determine how different social units interacted over space and time. And this is achieved by negotiating between general and context-specific models at these different scales.

Long-Distance Interaction Between States: World-Systems Theory in Perspective

Most recent investigations of interaction between states and their neighbors have relied – or drawn heavily from – world-systems theory (for example, Kardulias 1999b; Stein 1999). Unequivocally the most dominant general model used in understanding long-distance interaction between states, world-systems theory has proven quite fruitful in explaining and describing some aspects of exploitative core-periphery relationships, especially in those instances where the core is a large, hierarchical, economically and politically centralized state, and the periphery a smaller, less hierarchical, society. But world-systems frameworks are much less effective at dealing with more subtle relationships between complex polities of varying scales and with more similar systems of political and economic organization, as is the case with the Bronze Age Aegean.

In its initial conception (Wallerstein 1974), the world-systems concept was intended to model interaction between culturally different societies linked together via the vital exchange of food and raw materials (Chase-Dunn and Grimes 1995, 389). Wallerstein was concerned particularly with the nature of interaction between different kinds of industrial state societies focused on the tendency of more powerful cores to exploit less powerful peripheries.

Although Wallerstein's initial model was designed explicitly to deal with very recent or modern capitalist systems, several authors have adapted the initial model to deal with different historical contexts including smaller, non-capitalist systems, effectively extending the applicability of the model several thousand years into the past (Frank and Gillis 1996; Schneider 1977; Chase-Dunn and Hall 1993; Kristiansen 1987; see Chase-Dunn and Grimes 1995 for discussion). A critical shift in these adaptations was a reworking of the model such that it no longer refers exclusively to vital goods that affect everyday life, but also includes prestige goods and more symbolic items.

Chase-Dunn and Hall (Chase-Dunn and Hall 1993, 855) prefer a more general definition of world-systems that facilitates comparisons of interactions between societies of dramatically different political and economic organization. They define world-systems as:

... intersocietal networks in which the interactions are important for the reproduction of the internal structures of the composite units and importantly affect changes that occur in these local structures.

This definition encompasses interactions between states and stateless societies by approaching world-systems from a broad-brush, lumping perspective.

Others have modified the basic tenets of world-systems theory to allow for more active participation on the periphery. For example, Nick Kardulias' concept of "negotiated peripherality" is particularly useful for understanding the changing nature of the relationship between the Minoan and Mycenaean states and their Near Eastern and Egyptian counterparts (Kardulias 1999a, 2001; see also Morris 1999). In contrast to Wallerstein's original model, which emphasized the exploitive relationship between dominating cores and passive peripheries, the concept of negotiated peripherality captures the active roles played by people living outside the core (see Hall 1986). Kardulias (2001, 1) defined "negotiated peripherality" as follows:

...the willingness and ability of individuals in peripheries to determine the conditions under which they will engage in trade, ceremonial exchange, intermarriage, adoption of outside religious and political ideologies, *etc.* with representatives of expanding states...

Although these adaptations to Wallerstein's initial formulation of the model permit general patterns of inter-societal relations to be articulated between societies with different levels of political and economic complexity, they ultimately dilute the descriptive and explanatory power of the model as it was initially formulated. In addition, these modified world-systems approaches are most effective at describing relationships that occur at large geographic and temporal scales – often encompassing long units of time and large units of space – but the utility of world-systems as an explanatory framework breaks down considerably when more detailed understandings of specific cultural histories with refined chronologies are brought to bear on the model. In these instances, as in the case of the Aegean, world-systems frameworks provide significantly less satisfying models for understanding inter-societal interactions, and discussions of interaction tend towards more descriptive models of exchange, warfare, and inter-marriage.

Several Aegean prehistorians have flirted with world-systems as a general framework for modeling long-distance interaction between the Aegean and its neighbors, most notably Andrew and Sue Sherratt (A. Sherratt 1993; A. Sherratt and S. Sherratt 1991), and Nick Kardulias. In his response to Andrew Sherratt's 1993 question "What would a Bronze-age world system look like?" Kardulias (2007) responded in 1999 "the Mycenaean world system was multi-tiered, with some central elements and activities, while others were decentralized." In his application of the model to Mycenaean states, Kardulias amended the world-system framework to include a multi-tiered world system that contained local/internal systems that operated within individual polities and an intermediate system that operated throughout the Aegean (island to island, and island to mainland), in addition to the inter-regional system that linked the Aegean into the circum-Mediterranean world system. Like Kardulias, I advocate an approach that works at multiple scales, but, in contrast to his approach, I argue it is important to consider world-systems as only one of many possible frameworks for modeling interaction.

While a world-systems framework may be useful for explaining the nature of relationships between societies that have different scales of political and economic complexity at a very general level, it can mask variability at the local level and over time. In addition, when Wallerstein's original model is constantly modified and amended to fit different historical contexts, the more general explanatory value of the model is lost and the concept of world-systems comes to mean little more than long-distance interaction. Such a framework is more informative when it is applied in concert with models that attempt to depict variability at these other scales.

Close-Distance Interaction Between States: Peer-Polity Interaction

The regional scale equivalent to world-systems is peer-polity interaction, a model proposed initially by Renfrew and Cherry (1986) to explain the nature of interaction between autonomous socio-political units within a culturally homogeneous region. The concept of peer-polity interaction built upon Renfrew's concept of Early State Modules by proposing that the nature of interaction between polities themselves could encourage processes of social change, and specifically increasing hierarchical differentiation:

...in a region with peer polities which are not highly organized internally, but which show strong interactions both symbolically and materially, we predict transformations in these polities associated with the intensification of production and the further development of

hierarchical structures for the exercise of power (Renfrew 1986, 8).

They identified three main types of peer-polity interaction:

- competition (including warfare) and competitive emulation
- symbolic entrainment and the transmission of innovation
- increased flow in the exchange of goods.

In his application of the concept to Bronze Age Crete, John Cherry (1986) argued that although peer-polity interaction could not be invoked as a model for explaining the emergence of Minoan polities, the model did a very good job of explaining similarities in bureaucratic organization, architecture, writing systems, and ideology.

More recent models have emphasized the variability exhibited on Crete, especially during the formation of the early palatial centers. These authors, including Ilse Schoep (2002, this volume), have criticized Cherry for masking regional and temporal variability. But models that emphasize internal variability run the risk of swinging the pendulum too far in the opposite direction – at overplaying differences at the expense of masking similarities.

A more prudent approach is to identify those instances where there is good evidence of specific kinds of peer-polity interaction and where there is not. In this way, it is possible to use peer-polity as a model to explore patterns of regional and temporal variation. As with world-systems, such models are especially productive if they are combined with models that try to explain variability at other social and geographic scales.

Interaction Within States: Dual-Processual Theory and Context-Specific Models

Specific models that aim to describe the internal organization of specific polities are the hallmark of Aegean Bronze Age research. The combination of information from long-term excavations, intensive surveys, and textual archives has produced some of the most detailed descriptions of early state economies in the world (see Galaty and Parkinson 2007; Parkinson and Galaty 2007). Most scholars now have abandoned piecemeal models that integrated data from several different polities to construct a model of “the Mycenaean economy” in favor of context-specific models that seek to understand individual polities on their own terms (see Nakassis, this volume; Halstead 2007). While these models describe the intricacies of the economic, political, and ideological organizations of specific polities, they seldom do so in such a way that they can be used in a comparative framework that permits Aegean states – like the Mycenaeans – to be compared to other ancient states, such as the Minoans, let alone the Mayans.

Recent models that try to characterize states at this more general level include Blanton, Feinman and others’ Dual-Processual Model (for example, Blanton *et al.* 1996; Feinman *et al.* 2000), Brumfiel, D’Altroy and Earle’s staple- and wealth-finance model (Brumfiel and Earle 1987; D’Altroy and Earle 1985), Clarke and Blake’s agent-based aggrandizing model (Clark and Blake 1994), and Hayden’s conspicuous consumption/feasting model (Hayden 1995). Although these generalizing models mask the detailed variability of the context-specific models, they provide a mechanism necessary for comparing the specific features of different states.

Within the Aegean, Schoep and Knappett have argued that a heterarchical framework helps describe the differential emergence of the Minoan palaces (Schoep and Knappett 2004). Mike Galaty and I have suggested that dual-processual theory, as described by Blanton, Feinman and others, helps outline the major differences between Minoan and Mycenaean organizational strategies (Galaty and Parkinson 1999, 2007; Parkinson and

Galaty 2007). While these more general models can mask variability at the local level, when used with models that seek to explore variability at larger social and geographic scales, they can facilitate our understanding of cross-cultural variability.

Long-Distance Interaction and the Bronze Age Aegean

Models of long-distance interaction in the Bronze Age Aegean rely upon two main data sets: 1) direct evidence, in the form of artifacts that were produced or made on raw materials that derived outside the Aegean; and 2) indirect, pictorial and literary evidence. I concentrate my discussion here only on the archaeological evidence.

The past decade has seen the explosion of several specific models that seek to explain the relationship between the early states of the Aegean and their contemporaries. Unfortunately, the models that have been proposed, which were created to explain the same patterns in the data, vary tremendously with regards to the role Aegean societies played in long-distance exchange during the Bronze Age. Some, such as Eric Cline (for example, Cline 1994, 1998), argued that the states of the Aegean were integrally interconnected into a circum-Mediterranean exchange sphere, to the extent that an Egyptian embassy may have been sent to the Aegean during the reign of Amenhotep III and that the Hittites may have directed an embargo against the Aegean throughout much of the Late Bronze Age. Sofia Voutsaki (Voutsaki 2001) argued that Mycenaean leaders aspired to become members of this large international diplomatic circuit and she linked processes of centralization on the southern Greek mainland to the intensification of social ties with the East. Others, such as Sue Sherratt (S. Sherratt 2001), downplayed the role of the Aegean states within the circum-Mediterranean exchange sphere.

If everyone is analyzing the same data, then clearly something is wrong. This, of course, is part of the problem. The textual and literary references that speak to the relationships between the Aegean and the states of Egypt and the Near East are equivocal at best and can be used to affirm or dismiss different models of interaction. Similar analytical problems plague models that focus on the more direct, artifact-based, evidence. One researcher's bric-a-brac is another researcher's state sponsored voyage.

One productive avenue of research is to develop explicit comparative frameworks for modeling long-distance exchange between the Aegean and its neighbors. By modeling, for example, how the frequency and distribution of so-called "foreign" (non-Aegean) artifacts and materials within the Bronze Age Aegean compares to the frequency and distribution of similar materials moving between Egypt, the Near East, and Mesopotamia, it is possible to gain a better understanding of the role of the Aegean states within the larger circum-Mediterranean exchange sphere. It also is possible to do the same by looking at the kinds and types of literary and pictorial references in different archaeological contexts, and by comparing these to similar references in other contemporary states, but that is beyond the scope of the current article.

Long-Distance Exchange Contacts

Eric Cline (Cline 1994; see also Cline 2007) has catalogued all of the so-called "foreign" artifacts in Late Bronze Age Aegean. This includes over 1000 artifacts discovered at Aegean sites that were manufactured beyond the Aegean cultural area or were made on raw materials not available in the Aegean.

Although Cline was concerned primarily with general trends in the data, his catalogue can be used to model how systems of long-distance exchange varied throughout different

areas within the Aegean over time. I do this by parsing Cline’s dataset and looking at diachronic patterns in the data on Crete and on the Greek Mainland. The picture that emerges from this re-analysis is that long-distance exchange with the Aegean was infrequent, sporadic, and consisted primarily of the importation of small prestige items. That said, there are interesting patterns in the differential distribution of these items over time, and between the Mainland and Crete. These patterns, I argue, are indicative of different economic and political processes related to the participation and control of long-distance exchange networks that were at work on Crete and the Greek Mainland throughout the Late Bronze Age.

Region	Items	Contacts	Items/Decade	Contacts/Decade
Crete	407	284	6.78	4.73
Mainland	351	196	5.85	3.26
Islands	96	88	1.60	1.46
Total	854	568	14.23	9.46

Table 2.1. Number of imported items and contacts from Late Bronze Age contexts in the Aegean. See text for discussion. Data based on Cline 1994.

The raw material types, artifact types, and discovery contexts of the “foreign” items suggest that they were highly valued prestige goods (see Voutsaki 2001). With the exception of the ceramic artifacts, most of the artifacts were made from raw materials with restricted geological distributions. Most of the artifact types are small items that required significant investment or specialization to manufacture, and they almost all derive from archaeological contexts associated with the elite portion of the social strata – from elite tombs, primary centers, or secondary centers.

Cline focused his analyses on the numbers of artifacts at different sites and from different regions over time. This approach – based on the raw number of artifacts – overestimates the frequency with which interaction occurred between the Aegean and its neighbors because it lumps together groups of artifacts that almost certainly arrived in the Aegean during the same episode of interaction (Manning and Hulin 2005, 283). The total number of artifacts, when employed as an indicator of long-distance interaction, gives a maximum number of face-to-face interactions, if each episode of exchange only involved one artifact.

I transformed Cline’s data to model the minimum number of “contacts” required to produce their distribution in the archaeological record (Table 2.1). By analyzing both the number of “contacts” and the raw number of artifacts, it is possible to generate a range of interaction that occurred at a given site in a given time period, thus avoiding the problem of placing too much weight on a single cache of artifacts that most likely were transported together to the mainland and therefore are indicative of only one “contact” with (or episode of interaction with) overseas.

To determine the number of contacts I entered the data provided by Cline into a database program and sorted it into groups of material from similar contexts, similar periods, and similar origins: these are what I call “contacts” – groups of artifacts from the same context at a single site, which are dated to a similar time period and which derive from a single geographical region. For instance, the three Mesopotamian or Syro-Palestinian glass beads (Cline 1994, nos. 40–42) from Mycenae, Chamber Tomb 49, which is dated to LH I, are considered evidence of a single “contact.” This is based on the argument that it is

more likely that the beads were all acquired at a similar time via a single episode of interaction with the Levant, than that they were each acquired individually, through different contacts. Similarly, the faience material from northeast of the Lion Gate at Mycenae (Cline 1994, nos. 98, 483) all is dated to LH IIIB and comes from 18th Dynasty Egypt. Although there are both plaques and a bowl represented in the assemblage, it is not unreasonable to assume that all of the items were acquired via a single contact with North Africa, despite the fact that they are different artifact types. They are, therefore, also considered a single contact.

If, however, items from a single context derive from more than one geographical region, such as Shaft Grave V, Grave Circle A, from Mycenae (Cline 1994, nos. 597, 907, 942, 943), which contains items of both Egyptian and Syro-Palestinian origin, then the number of contacts is based upon the number of geographical regions represented (in this case, two). This is based on the assumption that items originating from different geographical areas were acquired via different contacts. Given the variety of different geographical regions represented in the artifacts found on the Uluburun and Cape Gelidonya shipwrecks (Bass 1997), the current methodology almost certainly lumps together items that derived from different areas, but which arrived in the Aegean at the same time. But the point here is to determine the number of contacts that were made with foreign lands by LBA mainland Greeks, not to determine the minimum number of shiploads that would have been required to produce it. When viewed from that perspective, the total number of non-Aegean items on just those two shipwrecks – Ulu Burun and Cape Gelidonya – account for one quarter of all those discovered throughout the Aegean.

The number of minimum contacts for each region and period is substantially lower than the raw number of artifacts, but the general trends documented by Cline persist. The main effect of this data transformation is a significant reduction in the number of contacts at those sites that have more items. On the Greek Mainland, for example, the raw number of artifacts at Mycenae, Tiryns, Perati, and Thebes is reduced to significantly fewer contacts. The total number of 111 artifacts at Mycenae is reduced to 61 contacts. The 39 foreign artifacts from the cemetery at Perati are reduced to 26 contacts. The 41 foreign items at Thebes is reduced to only seven contacts, and the 36 foreign items at LBA Tiryns is reduced to 29 contacts. By contrast, the number of contacts at sites with substantially less material is only slightly lower than the number of artifacts.

By looking at both the number of items and the minimum number of contacts it is possible to get a sense of the frequency of long-distance interaction between the Aegean and its neighbors. Assuming that the Late Bronze Age lasted approximately 600 years, the total number of items in the Aegean can be accounted for by a very small number of items and contacts, especially when scaled by decade.

It is difficult to interpret these numbers without an out group or control. I had hoped to produce a similar dataset from the Near East or Cyprus, but no one has carried out a systematic collection that is directly comparable to Cline's data set. Although there is good documentation of Aegean materials discovered in Egyptian and Near Eastern contexts, I have not been able to find a catalog that records the quantity of materials that moved from Egypt into Syro-Palestine or between Anatolia and Syro-Palestine and Mesopotamia. There is literary and pictorial evidence, but no raw numbers of artifacts that are directly comparable to Cline's dataset. My general sense is that this is because there was so much material that moved between these regions that creating such a database would be a daunting task.

Crete	LM I-II	LM IIIA-B	LM IIIC
Number of Items	128	196	17
Number of Contacts	76	144	8
Number of Sites	17	17	5
Mainland	LH I-II	LH IIIA-B	LH IIIC
Number of Items	43	151	76
Number of Contacts	21	65	36
Number of Sites	11	22	11

Table 2.2. Number of imported items, contacts, and sites with imports by period on the mainland and Crete. The table includes only items securely dated by Cline 1994.

Bevan's (2004) examination of Egyptian bowls suggests that even during Early and Middle Minoan Crete, there was variability in the ways sites such as Knossos, Mochlos, and the Mesara were involved in long-distance exchange. He argues that by MM IA familiarity with Egyptian material culture was so widespread that it influenced funerary rituals in the Mesara, but at no time did the frequency of Egyptian bowls on Crete approach that of sites such as Byblos, which he suggests may have been an intermediary. In a discussion of Egyptian material culture dating to the reign of Amenhotep III throughout Western Asia, Cline (1998) notes that scarabs naming the pharaoh and calcite vessels are "extremely common" throughout the Levant.

Perhaps more informative is data from Early Iron Age Crete. Jones (2000) recorded the origins and dates of overseas artifacts from Crete between 1100–600 BC. Not including material from the Greek Mainland and the Aegean Islands, he documented 380 items (7.62 items/decade). The 380 Early Iron Age items on Crete is nearly as many as the 407 documented for the Late Bronze Age, and the frequency of 7.62 items/decade actually exceeds that of the Late Bronze Age.

A perspective that focuses on the minimum number of contacts that would have been required to produce the distribution of materials, rather than one that focuses on the total number of items, gives a sobering look at the scale of long-distance exchange during the Bronze Age, suggesting that models that rely on formalist economic principles, such as world-systems frameworks, should be used extremely cautiously, if at all.

This same dataset can be used to explore diachronic trends on the Greek mainland and on Crete. I did this by scaling the total number of artifacts or contacts by the number of decades in each period: LH I–II = *ca.* 1700–1390 = 31.0 decades; LH IIIA–B = *ca.* 1390–1186 = 20.4 decades; LH IIIC = *ca.* 1186–1070 = 11.6 decades. The patterns that emerge reflect the different ways long-distance exchange played out in the different regions over time (Table 2.2). For example, Crete dominated exchange throughout the Late Bronze Age, with more items and contacts than the Greek Mainland until LB IIIC, when the numbers decreased on Crete and increased on the Mainland (Fig. 2.1).

But the relationship between the number of items and the number of contacts was considerably different in both regions throughout the Bronze Age. On the Greek Mainland the number of items far exceeded the number of contacts, especially during LH IIIA–B. On Crete, by contrast, these two numbers remained closer together. This means that there were more concentrations of artifacts on Mainland sites than on Crete, suggesting that there were different systems of acquisition and distribution.

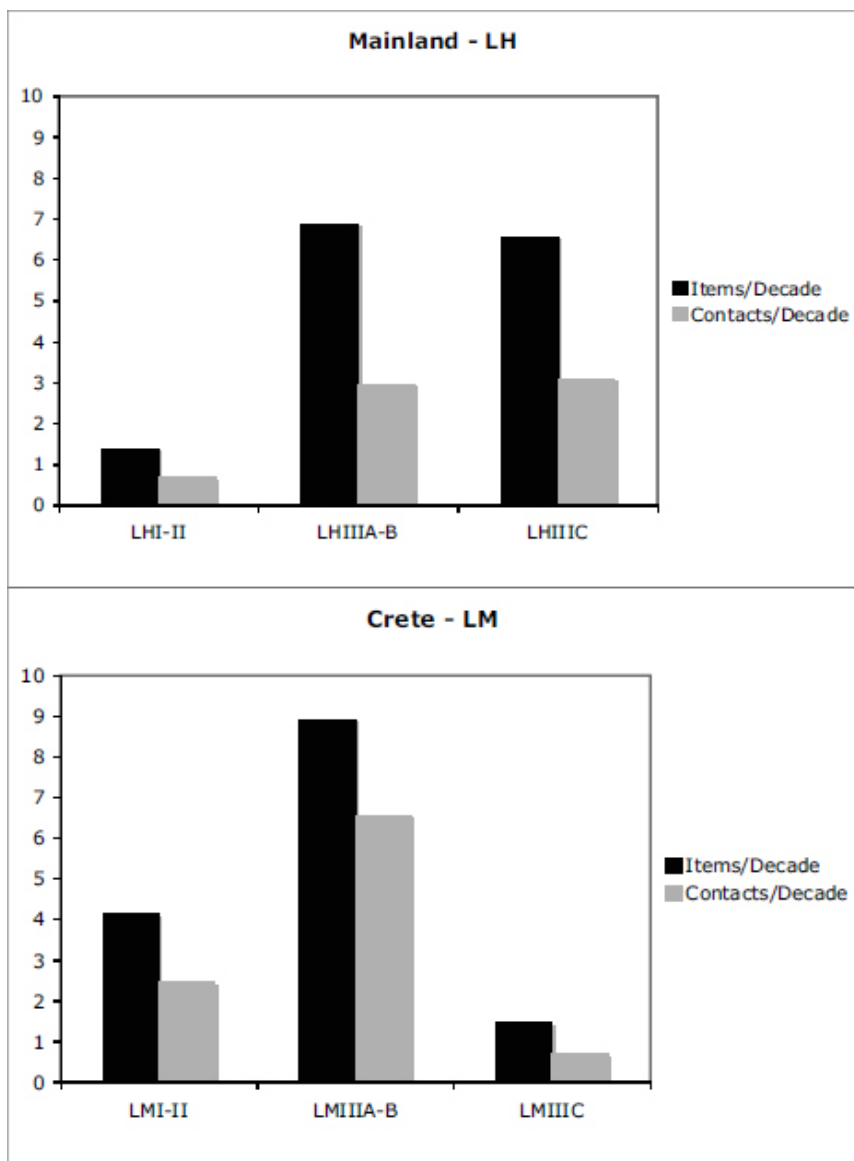


Figure 2.1. Number of imported items and contacts by decade from Late Bronze Age contexts in the Aegean.

In addition, although evidence of long-distance exchange decreased at the end of LB IIIA–B, this trend was restricted to Crete. On the mainland, although the number of items that can be dated exclusively to LH IIIC dropped, the frequency of contacts remained essentially the same, mostly because of the concentration of materials from the cemetery at Perati.

When this regional variability is explored in more detail, two interesting patterns

emerge. On the mainland, Mycenae dominated long-distance exchange until LH IIIC. During LH I–II, the vast majority of contacts were concentrated at Mycenae, with one or two contacts at nine other sites (Fig. 2.2). During LH IIIA–B, Mycenae continued to dominate, and more sites exhibited a few contacts, but Tiryns and Thebes, other Mycenaean centers, also began to emerge as points of long-distance exchange. In LH IIIC, those sites that had dominated in earlier phases of the Late Helladic, including Mycenae and Tiryns, were replaced by the cemetery at Perati.

In contrast to the Mainland, where the dataset permits one to track the role of long-distance exchange alongside the emergence and eventual collapse of the Mycenaean palatial centers throughout the Late Bronze Age, the data set only can be used to model the Neopalatial period on Crete.

The picture on Crete at the beginning of the Late Bronze Age is very different from the mainland (Fig. 2.3). From the beginning of the Late Bronze Age, many more sites are represented on Crete, and in contrast to the mainland pattern, where Mycenae dominated in LH I–II, Knossos, Kato Zakro, Mallia, and Kommos all stand out as having substantially more contacts than the other sites. This pattern is more similar to the LH IIIA–B period on the mainland, probably because it represents competition for access by elites at competing centers. Especially striking is the reorganization of contacts in LM IIIA–B Crete, where the main palatial centers drop out and Kommos stands out as the only substantial point of exchange on the island. This is intriguing, given the continuation of central places like Knossos and Khania to function as central administrative centers during this Post- or Final Palatial period (Rehak and Younger 1998).

In contrast to the mainland pattern, where the primary centers dominated long-distance exchange until LH IIIC, on Crete Kommos appears to have usurped – or been granted – this role for the whole island. This may be due to differences in political and economic organization between Crete and the Mainland. Whereas the elite of Mycenaean states on the mainland were very concerned with controlling access to long-distance exchange networks, their counterparts on Crete were content to permit the decentralized operation of long-distance exchange to be dominated by a non-palatial center. Internally, this may be the result of the syncretism of Mycenaean administrative systems with more ancient heterarchical forms of Cretan political organization (Schoep and Knappett 2004; Haggis 1999). Externally, it may be related to the establishment of a new era of trade, where the exchange of high value materials began to occur independently of state control (A. Sherratt and S. Sherratt 1991; S. Sherratt and A. Sherratt 1993).

The variability exhibited in long-distance exchange throughout the Aegean during the Late Bronze Age indicates several patterns that can be fleshed out by models that work at more local levels. To begin with, the frequency of interaction suggests that models that operate on formalist economic principles, such as world-systems theory, need to be used cautiously. In a very general sense, the low-bulk, high-value goods that arrived in the Aegean, and the relatively high-bulk distribution of Aegean stirrup jars in the Near East, fit the sort of expectations outlined by a core-periphery relationship. And the temporal variability between Crete and the Mainland suggests there might be a shift in these core-periphery dynamics over time. But at the more local level, this general model breaks down because it masks local variation that only can be explained by more specific models.

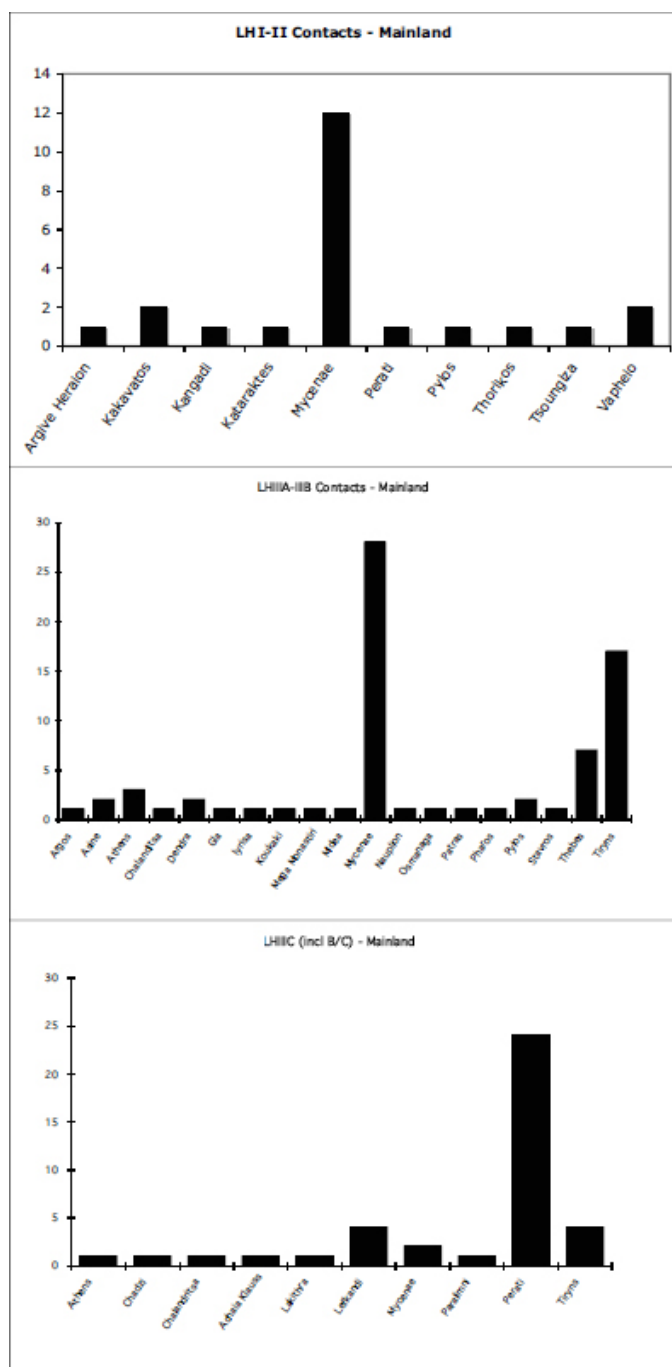
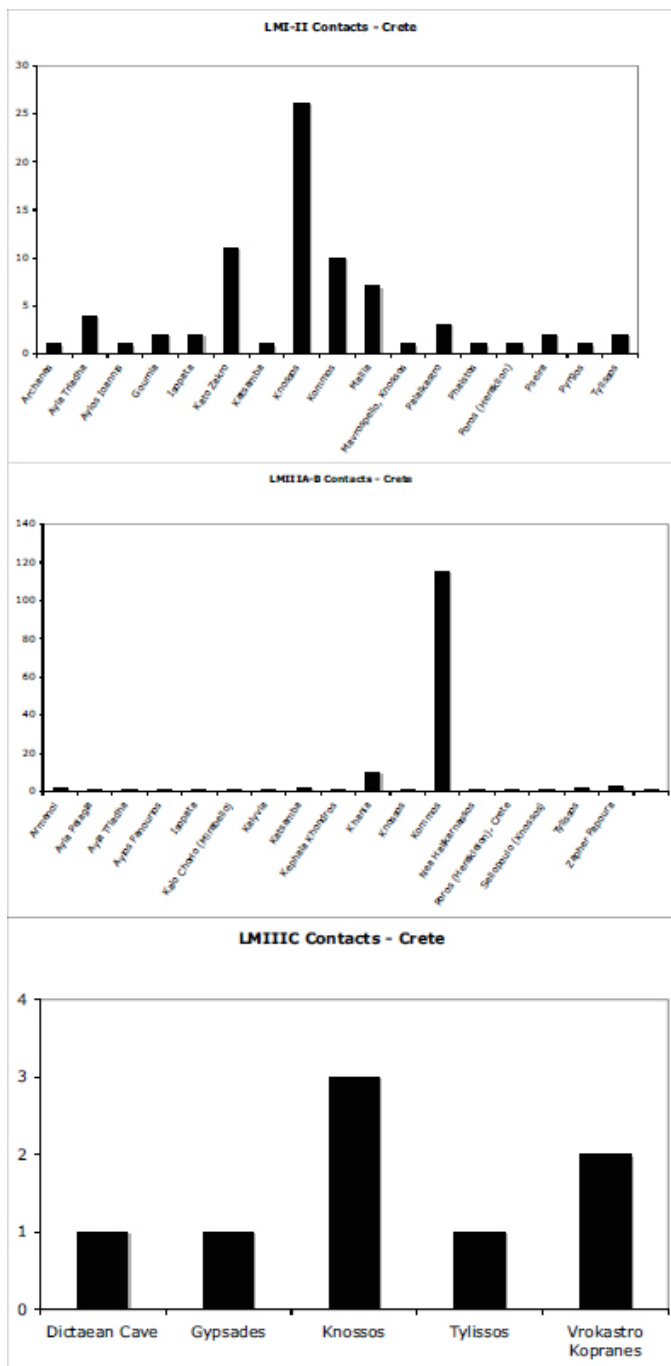


Figure 2.2. Number of contacts by site on the Greek Mainland during the Late Bronze Age.



Close-Distance Interaction in the Bronze Age Aegean

This same dataset also can be used to explore interaction between polities within the Aegean, and to reveal patterns of variability at the more regional level. For example, the pattern of long-distance exchange from LM I–II Crete fits the basic expectations of a peer-polity interaction model between Knossos, Mallia, and Kato Zakro during the Neopalatial period. These sites all exhibit substantial numbers of “foreign” contacts that suggest elite at these sites competed for access and control of long-distance exchange, a specific form of peer-polity interaction through competition and competitive emulation. The nature of peer-polity interaction with regards to long-distance exchange changed dramatically during the Postpalatial period, when Kommos became the dominant node of exchange on the island. Although competitive peer-polity interaction works well at explaining the pattern of long-distance exchange during LM I–II, it does not explain the LM III pattern.

On the mainland, a similar pattern of peer-polity competition for long-distance exchange emerged between Mycenae, Tiryns and possibly Thebes during LH IIIA–B. But, as on Crete, evidence for this specific kind of peer-polity interaction includes only some primary centers. Pylos, for example, seems to have been marginal to the long-distance exchange sphere throughout the Late Bronze Age, suggesting that the nature of peer-polity interaction between Pylos and its peers was substantially different than it was between Mycenae and Tiryns, for example.

Other data, such as the distribution of obsidian on various surveys throughout the Aegean, suggest that Messenia was marginal not only to the sphere of long-distance exchange, but also to the main exchange sphere that circulated materials throughout the Aegean itself (Cherry and Parkinson 2003). Table 2.3 shows the relative percentages of obsidian in lithic assemblages collected on different surveys by their distance from Melos. The strong fall-off in obsidian suggests that the Mycenaean state centered at Pylos was not only beyond the sphere of exchange of long-distance prestige goods, but also of more mundane exchange items.

Although a model of intensive peer-polity competition that includes competition, competitive emulation, symbolic entrainment, and increased flows of goods may go a long way towards explaining the long-distance exchange relationships that existed between Mycenae and Tiryns, and so may be helpful at explaining the formal similarities and scalar relationships between those two palatial centers, this same model cannot explain the similarities between Pylos and the other Mycenaean centers.

This reinforces the importance of regional variability and lends support to those more specific models that seek to outline variability in the political and economic organization of individual polities (see, for example, Wright 2004a). General models, such as peer polity – that seek to describe interaction between polities – are more meaningful when viewed in concert with models that work at different social and geographic scales.

Survey	Number Chert	Number Obsidian	Total Lithics	Percent Chert	Percent Obsidian	Density	Area Intensively Covered	Distance to Melos
Melos				1.00	99.00		151	–
Kea	6	1005	1011	0.59	99.41	56.17	18	105
Argolid	2294	4259	6553	35.01	64.99	148.93	44	120
Methana	125	1122	1247	10.02	89.98	x	x	130
Lacornia	63	1575	1638	3.85	96.15	x	x	160
Berbat	755	1510	2265	33.33	66.67	90.60	25	175
Nemea	288	238	526	54.75	45.25	10.52	50	195
PRAP	912	192	1104	82.61	17.39	27.60	40	240

Table 2.3. Number of lithic artifacts made on chert and obsidian from survey projects throughout the Aegean. For more discussion see Cherry and Parkinson 2003.

Interaction Within Polities: Obsidian Blade Production and Distribution

Several authors, including Sofia Voutsaki (Voutsaki 2001) and Bryan Burns (Burns 1999), have documented the complex variability exhibited in the production, distribution, and consumption of prestige items within different Mycenaean polities. These studies document a wide range of variability in the kinds of goods that were produced at different polities, despite a recurrent concern of the Mycenaean elite to control their production and distribution. The distribution of long-distance contacts throughout the mainland indicates that the control of access to long-distance exchange networks played a critical role in how the elite at places like Mycenae and Tiryns expressed and cultivated authority. But this does not seem to have been the case at Pylos, where the nature of elite authority may have relied more upon locally created prestige goods or traditions such as feasting (Wright 2004a, 2004b). All this speaks to variability in the organization of the elite sector of Mycenaean economies. Schoep and Knappett (Schoep and Knappett 2004), Haggis (Haggis 1999), and others have discussed similar regional variability in the organization of elite strategies at Minoan centers, especially during the Protopalatial period.

Analyzing the organization of the production and distribution of obsidian blades permits a glimpse into a portion of the economy that does not seem to have been related to the demonstration of prestige by competing elites. By contrast, it shows the operation of a more mundane sector of the every day economy that was carried out by craft specialists who operated out of decentralized locations that were beyond the scope of centralized palatial control. In contrast to the variability exhibited in the prestige sectors of the economy, this mundane aspect of economic organization seems to have been organized similarly in different areas across the Greek Mainland (Parkinson 2007), and possibly even on some of the Islands (Kardulias 2007). Given the geographic variability in the distribution of obsidian across the Aegean discussed above, consistency in the organization of obsidian blade production in different regions suggests that these more mundane aspects of the economy were in place prior to the establishment of palatial centers, and that they persisted, co-existed, and articulated with those palatial centers as they extended their authority into their hinterlands, but that they never were co-opted by them.

In Messenia, for example, despite the low occurrence of obsidian in the local lithic assemblage, nearly all the evidence for the production of obsidian blades collected by the Pylos Regional Archaeological Project derives from a single site – Romanou (I4) – near the coast, alongside the possible manmade harbor. Obsidian arrived at this site from Melos in the form of roughed out nodules and both core production and blade production occurred on the site. Blades were distributed from this site to other sites in the region. In contrast to Romanou, where there is good evidence for blade production, all the other sites in the region, including the Palace of Nestor (B7), received obsidian, blades in their finished form (Table 2.4).

I have argued that obsidian blade production in Messenia was a skilled, if not purely specialized, craft activity that occurred independently of palatial control (Parkinson 2007). I made this argument based on the decentralized location of the activity – at Romanou – and based on the lack of mention of obsidian blade production in the Linear B tablets. In my argument I noted the tendency of the palatial elite to centralize production at the palace itself, and John Killen and others have criticized this assertion, citing that several

specialized crafts documented in the Linear B tablets did not occur at the palace (Killen 2007; Cherry and Davis 2007). But these criticisms miss the point I tried to make, which is that those off-site craft activities in which the elite were interested were documented, rather meticulously, in the Linear B tablets.

Obsidian blade production was not centralized at the palace, nor was it mentioned in the Linear B tablets, and it seems to have occurred beyond the scope of palatial control. Citing similar patterns of obsidian blade production elsewhere in the Aegean, I suggested that traditions of obsidian blade production, like some aspects of pottery production likely developed earlier in the region and remained relatively autonomous as the palaces grew up around them.

And this is the point I want to emphasize here – the recurrence of these patterns across the mainland. Kardulias and Runnels (Kardulias and Runnels 1995) noted a similar pattern at Fourni in the Argolid, and data from elsewhere exhibit a similar pattern (Kardulias 1992, 2007; Hope Simpson and Dickinson 1979; Hope Simpson and Waterhouse 1961; see also Newhard 2003).

The consistency in the organization of systems of obsidian blade production and distribution across the Greek mainland suggests that this aspect of the local economies developed prior to the emergence of the palaces in those various regions, and that they continued to function throughout their ontogeny. This consistency in the organization of a more mundane aspect of the economy contrasts sharply to the variability exhibited in the organization of the more elite sectors of the Mycenaean economy, which varied considerably at different centers. By examining the political and economic organization of Mycenaean states from these different perspectives, and at different temporal and geographic scales, it is possible to negotiate specific and general models that will help us understand not only the variability between different Mycenaean polities, but also between Mycenaean states and those elsewhere in the world.

POSI	Site Name	Obsidian Blades	Obsidian Blade Cores	Total Obsidian	Total Chert	Total Chipped Stone
A2	Kalopsana	0	0	0	5	5
A4	Metamorfofi Skarminga	0	0	1	21	22
A5	Metaxada Kalopsana (2)	0	0	0	3	3
B7	PoN Lower Town	0	0	1	29	30
C1	Tragana	0	0	0	1	1
D1	Kanalos	0	0	2	11	13
D2	Megas Kambos (1)	1	0	4	13	17
D3	Megas Kambos (2)	3	0	4	8	12
G1	Marathopolis Dialiskari	1	0	2	21	23
G2	Vromoneri Ayia Sotira	0	0	1	9	10
G3	Piyadia	1	0	4	18	22
I1	Beylermbei	5	0	8	28	36
I2	Haratsi	0	0	0	1	1
I3	Portes	0	0	1	4	5
I4	Romanou	14	5	77	37	114
I18	Romanou Rikia	0	0	0	59	59
I20	Nozaina	7	0	9	19	28
I28	Vergina Rema	5	0	5	119	124
I29	Romanou Kokevis Estate	0	0	0	3	3
K1	Ordines	7	0	12	70	83
K3	Kastraki	1	0	1	4	5
K4	Gargaliani Koutsouveri	0	0	0	2	2
M1	Kalantina (1)	1	0	3	53	56
M2	Kalantina (2)	2	0	6	21	27

Table 2.4. Number of lithic artifacts made on obsidian and chert from different sites within the Pylos Regional Archaeological Project study area.

It remains unclear whether similar patterns of decentralized obsidian blade production occurred on Crete. The question is whether the production of obsidian blades matches other patterns on Crete, like the production of specialized ceramic wares, which Day and Wilson (1998) suggest was decentralized from an early date. Carter (2007) has suggested obsidian blades were used during funerary ceremonies during the Early Cycladic period, and that their production was part of the performance associated with such rituals. It follows, therefore, that we can expect the organization of production of obsidian blades in the islands and on Crete to differ from the mainland pattern. Torrence (1979, 77–79) reports obsidian production areas at Knossos and Mallia, suggesting that palatial centers may have been the locus of specialized production but I have been unable to find published excavation or survey data from Crete that includes information about reduction sequences, which are necessary for such an assessment. Kardulias (2007, 107) also noted that a centralized pattern of blade production might occur on NE Crete, where cores and blades were identified at Mochlos, but only blades were identified at Debla and Myrtos. In NW Crete, Moody (1987, 202) noted a general falloff in the number of obsidian artifacts with distance from the coast, but she did not provide a description of the reduction sequences.

Examining the organization of the production and distribution of obsidian blades on Crete is essential not only for modeling variability in the economic and political

organization of different polities across the island, but also for determining how they compare to similar patterns from the Greek mainland, and elsewhere.

Conclusion: Scaling Interaction in the Aegean Bronze Age

I have attempted to make two main points in this article. First, I have tried to demonstrate how prehistoric studies of social interaction need to incorporate different geographic and social scales of analysis. When models of long-distance exchange, which in the Bronze Age Aegean inform about the elite sector of the political economy, are combined with models of regional and local interaction that inform about the more mundane aspects of past societies, a more complete picture of social interaction can be developed.

The second point I tried to make, which emerges from this multi-scalar approach, is that there was a great deal of variability in patterns of exchange and interaction within the Aegean. This variation occurred from polity to polity, and over time, on both the Greek mainland and on Crete. As a result, general models such as world-systems frameworks and peer-polity interaction can help explain some variability, but not all of it. Such models need to be applied carefully, and should be treated as one of many options for explaining the variability exhibited in the archaeological record. They should not be invoked as general explanatory frameworks that, with a little modification, work just fine at explaining everything. When this happens, models developed for explaining specific sets of social relations lose much of their explanatory power, and, along with it, their relevance. Witness the constant reworking of world-systems frameworks to deal initially with unequal relationships between non-capitalist nation states, then with non-state societies, then with low-bulk commodities. Somewhere along the way, the explanatory power of the model was lost and it has come to mean little more than “interaction.”

Implicit throughout this study has been a general concern with model building, and in particular how we build models of the Aegean Bronze Age. My study of Cline’s long-distance exchange data and of obsidian blade production allowed me to examine how models such as world-systems theory and peer-polity interaction relate to specific models built to handle the variability exhibited by different states that arose in different regions. I have argued it is necessary to negotiate between these general models, on the one hand, and the specific models, on the other.

Whereas the construction of general models is necessary for comparing individual states to each other, and for comparing different long-term regional trajectories, these general models ultimately are dependent upon specific models to keep them honest. The real problems arise when these different kinds of models are confused with each other – when general models are treated as specific models, and when specific models are treated as general models. As several papers in this conference demonstrate, the most productive approach is to keep each type separate and to negotiate rigorously between the two. By doing so, we will be able not only to refine our understanding of variability within and between the states of the Aegean, as this conference seeks to do, but also to compare our detailed understanding of the Aegean sequence to state societies in other parts of the world.

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SPIRIT OF PLACE. MINOAN *HOUSES* AS MAJOR ACTORS

Jan Driessen

There is no simple relationship between people and the space they inhabit (Whitelaw 2001, 16)

The difference between space and place is human experience (Moore 2005, 1)

Minoan Political Economy?

This paper starts with the assumption that any political economy is a reflection of the *social* organization of production, exchange and consumption and that it is not possible to talk about *Minoan* political economy as long as no serious progress is made on its societal organization. This implies that we cannot elucidate economic aspects of production, exchange and consumption without first identifying the *social parameters* that form their basis and the *scale* at which economic activities essentially operated, *i.e.* whether this was at the level of the individual household or domestic unit (the nuclear family), at a supra-household level, which we may call a corporate group, or at an even higher level such as a settlement, region or state (Feinman 2004, 2; see also the useful discussion by M. Smith 2004. But we can, of course, also use certain economic aspects to reconstruct the societal organization, as illustrated by Day, Relaki, and Todaro [this volume]). Identifying the elementary unit of production, distribution, transmission and reproduction, implies then a proper definition of the social basis of Minoan society – the topic of my concern – but, unfortunately, relatively little progress has been made since Evans’s days (Steadman 1996). Granted, a volume with exactly this title – Minoan society – was published in 1983 (Krzyszowska and Nixon 1983, especially Blasingham 1983; Cherry 1983; Hallager 1983; Kanta 1983; and Whitelaw 1983; see also Marinatos and Betancourt 1995), but very few studies therein or afterwards effectively address the question of how Minoan society was actually composed. In recent years, there has been an increase of good work on Neolithic and Minoan households, especially by people such as Halstead (1999), Tomkins (2004), Whitelaw (2001), and Glowacki (2004), and the soon-to-be-published proceedings of the STEGA conference may also advance our knowledge (Glowacki and Vogeikoff-Brogan forthcoming). But the only thing we can perhaps safely affirm today is that Minoan society qualifies as a middle-range society, a community somewhere on the continuum between egalitarian and highly-stratified (Blanton 1995, 109–110). The major obstacle to progress is that some researchers have argued, on the one hand, for recognizing autonomous nuclear families as the basic mode of social production as represented by some of the archaeologically preserved architectural configurations but, on the other hand, have failed to think this line through in accepting *all* architecturally delineated entities as autonomous residential households. Whitelaw, for instance, took Neopalatial Gournia as the basis for an argument for identifying standardization in house size, reflecting “nuclear or minimally-extended stem families of about 4–5 individuals or so” (Whitelaw 2001, 18, but on 2001, 21 an average household of 5–6 individuals is also proposed). He and others have claimed that,

from the Neolithic onwards, and throughout the Early and Middle Bronze Age into the Neopalatial period, *nuclear families* formed the basic social and residential unit of Crete. Larger architectural units were, following this line of thinking, seen as wealthier households with more specialized and larger rooms, but not necessarily of more people or as multi-family residences (see, e.g., Cutting 2006 for a critique). But in truth, rather few Minoan sites, from the Neolithic period onwards, effectively consist of small-scale structures that can easily be translated into such an interpretative framework. Having worked at sites that are striking because of the size of their buildings (Palaikastro, Malia, Monastiraki, Vathypetro, Myrtos), I am puzzled by the massive available residential space for the average Minoan residential unit. If we consider the so-called standardized Minoan house size, for example, which is said to be between 60 and 100 m², we should also take into account the upper floor which many if not most houses possessed and where in fact the essential domestic functions may have taken place (Driessen 2005). But this would mean that normal households had between 120 and 200 m², which is more than double the house space available in rural Cretan areas after World War II (Albaugh 1953, 89–91; Cutting 2006 for the difficulties and variations). I find this difficult to accept. My frustration is probably not sufficient to doubt the existence of nuclear families entirely but enough to question whether it was the *only* or even essential social basis for the political economy.

The sites that have served as the corner stones for the entire argument for the nuclear family hypothesis, Gournia and Myrtos Fournou Korifi, are perhaps not such good test cases after all. Where Gournia is concerned, it is a pity that no detailed stone-by-stone plan and find distribution account has ever been published, but some observations may perhaps allow us to doubt the usual equation: street entrance = house as the only possible explanation. Indeed, it can be shown that the street system was fixed from at least the early Protopalatial period onwards and so were the quarters or town blocks. Most of the blocks were laid out as a unit and double walls are very rare (Fig. 3.1). This may then perhaps rather suggest that a supra-household level was responsible for the neighborhood. Moreover, as Privitera has recently suggested, certain “communal, group-reinforcing” ceremonies involving several households took place within the different neighborhoods of the town at Gournia and “houses, separated on the ground floor level, may have been joined on the upper floor...” (Privitera 2005, 197). Neighborhoods seem to have had their own communal open space for ritual action and some economic features such as shops may have catered for the *vicus* only (Fig. 3.2). If this intermediate level between the nuclear family and the settlement is accepted, it will have to be backed up by a more refined archaeological study. Work by Kathryn Keith, following that by Stone, on second millennium Mesopotamia also showed that *neighborhoods* constituted a significant level of social and spatial patterning in Old Babylonian cities since it was these that decided their social interaction and gave them a sense of common identity (Keith 2003, 58). In this case, proximity imposes social and economic interaction and may have also have had political consequences. The Palio in Renaissance Sienna is perhaps a good parallel with the different *contradas* or neighborhoods of the town competing against each other.¹



Figure 3.1. Outline plan of Gournia with indication of double walls (redrawn by P. Hacıgüzeller).

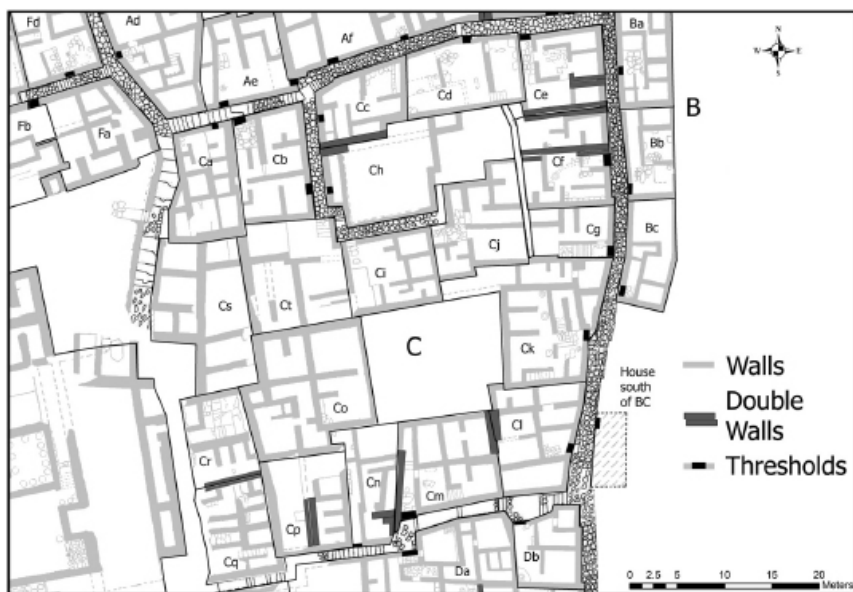


Figure 3.2. Gournia, Block C with indication of double walls, entrances and open space (redrawn by P. Hacıgüzeller).

In the case of Myrtos Fournou Korifi (Fig. 3.3), it is well known that Todd Whitelaw² argued for an organic and progressive accretional growth of this settlement with

constructions being added when children created new households. He assumed that “the households within the community were probably very closely related” (Whitelaw 1979, 74) and that the different households were linked through kinship but that there was no evidence and no need for a higher level of organization. Leaving aside Branigan’s view that the complex was a big-man’s house or some proto-palace (Branigan 1970, 47–49) or Tenwolde’s stress on the communal aspects of the site (Tenwolde 1992), the excavator, Peter Warren had a different opinion, and although he has more or less accepted that the site housed different families, he still regards it as some kind of clan building with a lot of sharing within the complex (Warren 1983). Despina Catapoti has also recently stressed the importance of communal activities taking place outdoors, linking these to others taking place indoor (Catapoti 2005, 172–175).³ Thus, the evidence is not unequivocal, so the answer cannot be simple and using Fournou Korifi to state that nuclear families were the norm is perhaps not such a good thing to do. We may compare with the frustration that filters through the account M. Shaw gives for Middle Minoan Kommos noting that “the problem between ‘aggregations of rooms’ and ‘multiroomed houses’ seems to be endemic to small MM towns or hamlets” and “it is almost impossible to isolate individual dwellings” (Shaw 1996, 361) or indeed Wright and McEnroe in the same Kommos volume (Wright and McEnroe 1996, 195–198, Pl. 3.5 for the difficulty identifying separate households) or A. Zoīs where Vasiliki is concerned (Zoīs 1990, 93, excluding the possibility that certain large Neopalatial houses were the result of the investment of single families). Add to this the contrasting opinions on what kind of societal segment was represented by the Prepalatial and Protopalatial tholos and house tombs – nuclear families, clans, lineages, tribes – and we realize that we are still at infancy where Minoan societal organization is concerned (Karytinos 1998). Indeed, although many researchers stress the possibility that Minoan burial customs accentuate group rather than individual status and affiliation, others are reluctant to express their views on the precise kinship relations represented. Maggidis (1998, 95) suggests the use of Burial Building 19 at Phourni to have been by a lineage during some 450 years “descending either from two nuclear families of five individuals, or from an extended family of 10 individuals; it seems, therefore, to be comparable to several house tombs in East Crete ... but rather different from the Messara tholos tombs, which have been viewed as tribal or clans tombs...” Many simply use the word “elites” or “elite groups,” avoiding the problem (Schoep this volume).

I here offer an alternative view that starts off with a few premises. First of all, we have to acknowledge that “the mortuary process was part of a community strategy” (Fowler 2004, 75), whatever the social segment represented within the tombs and whatever selection process it underwent. Secondly, since the “archaeological record of the built environment” remains “our main line of evidence for inferring the order of community life” (Mehrer 2000, 45), we have to recognize that it remains singularly difficult if not impossible to distinguish in our archaeological data specific kinship relations which are imposed by anthropological theory, so that we should perhaps better avoid to talk of such categorization at all (Table 3.1). Thirdly, we should bear in mind that people “in past societies were not necessarily individualized in the same way as in those of modern people, ... past identities may have been temporary, contextual, and community concerns” (Fowler 2004, 3).

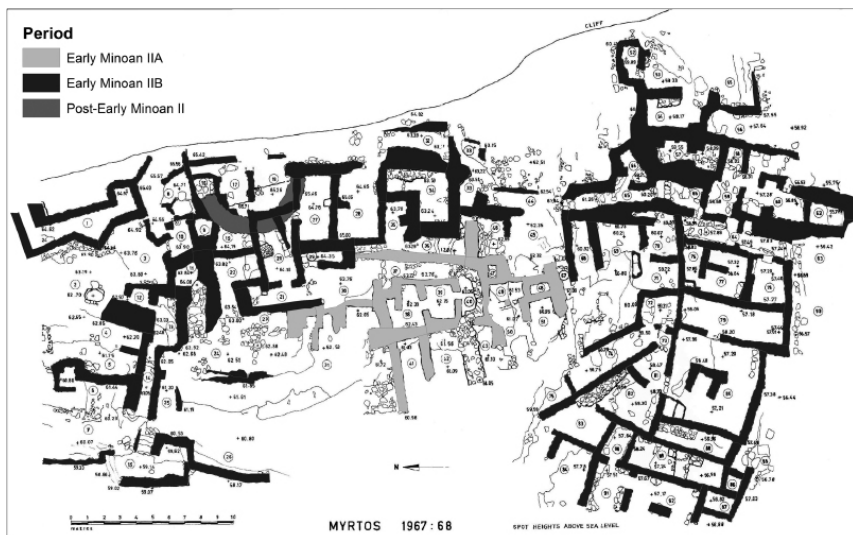


Figure 3.3. Myrtos, Fournou Korifi (redrawn by P. Hacıgüzeller).

Lineage	Kin group of persons whose membership is based on actual descent
Clan	Kin group of persons who claim (putative or fictive) descent from a common ancestor, sometimes mythological; clans may be organized in lineages
Household	Co-resident kin and co-resident dependents

Table 3.1. Anthropological kinship relations.

With this in mind, our basic archaeological data will be re-examined and it will be explored to what degree we can use the architectural evidence to reconstruct social structures. My main argument will be to see an *intimate personal relation between buildings and people*, in fact to regard the different architectural structures themselves as living bodies, but with an intergenerational quality which made them socially relevant to a succession of people organized in a community with an internal hierarchical organization, perhaps based on age and ritual experience, and perhaps also differentiated into different households but presenting themselves to the outside world as what is now often called a *House*.

In Fair Verona....

Two households, both alike in dignity,
In fair Verona, where we lay our scene,
(Shakespeare, Romeo and Juliet, Prologue)

The feud between the households of the Capulets and the Montagues, so expressively portrayed by William Shakespeare, was not so much a dispute between two families or factions but between two groups of people made up of kinsmen, both by blood and alliance, that rallied around what current anthropologists would – perhaps somewhat unfortunately because easily prone to misinterpretation – designate as *Houses*.⁴ It was Claude Levi-Strauss who first coined this term, using it to identify

a corporate body holding an estate made up of both material and immaterial wealth, which perpetuates itself through the transmission of its name, its goods, and its titles down a real or imaginary line, considered legitimate as long as this continuity can express itself in the language of kinship or of affinity and, most often, of both (Levi-Strauss 1982, 174).

First revitalized and scrutinized by Carsten and Hugh-Jones (Carsten and Hugh-Jones 1995), the Levi-Straussian concept of the *House* was recently reassessed and redefined as a useful model for anthropologists and archaeologists in different parts of the world in a volume edited by Rosemary Joyce and Susan Gillespie (Joyce and Gillespie 2000) and I will quote the latter study extensively (see also Beck 2007):

Groups referred to by the term “house” are corporate bodies, sometimes quite large, organized by their shared residence, subsistence, means of production, origin, ritual actions, or metaphysical essence, all of which entail a commitment to a corpus of house property, which in turn can be said to materialize the social group. Houses define and socially reproduce themselves by the actions involved with the preservation of their joint property, as a form of material reproduction that objectifies their existence as a group and serves to configure their status vis-à-vis other houses within the larger society (Gillespie 2000a, 1–2; Colloredo-Mansfeld 2002 for a review).

Indeed

Houses link social groups with architectural units that facilitate their physical delimitation and position in a society thereby integrating the social with the material life in its pragmatic and semiotic aspects (Gillespie 2000a, 2).

The attractive part in this concept is that *Houses* as communities leave sufficient space for agency, practice, structuration and interaction, allowing individual actors to manipulate their place within multiple social contexts at the same time as it de-emphasizes certain elements of affiliation (kin) – so difficult to identify by archaeologists – whereas stressing others (place) – so easy to identify by archaeologists. Gillespie insisted on the fact that the *Houses* “turned all ... classificatory assumptions on their head. Although houses, like clans and lineages, are long-lived corporate entities to which persons belong and from which they construct their identities and configure their social interactions, there is no singular form of affiliation” (Gillespie 2000a, 7). The *House*, in this paper, should then not be seen primarily or solely as an architectural form but as the *objectification* or *materialization* of an “enduring social group that is materially represented by a physical structure and the objects that go with it – furnishings, curated heirlooms, and graves – within a designated locus in the landscape” (Gillespie 2000a, 2–3). Heirlooms and rituals serve in-house integration but also claims to more elevated status. By definition, a *House* is multigenerational. Indeed, its survival depends on the consolidation and maintenance of the estate and its own social reproduction. This historical dimension is evidently one of the aspects that is most easily detected by archaeologists. I want to stress that both the intergenerational and locus-bound aspects are fundamental differences between the *House* and what Yannis Hamilakis and Jim Wright have called *factions* (Wright 2004, 70–75). Indeed factions are

functionally and structurally similar, informal, leader-focussed organisations. One of [their] main characteristics ... is the competition for material and social resources within a larger social unit such as kin, village or ethnic group The faction develops a loose corporate identity which in the end, results in emphasising more the differences between factions rather than the differences between the members of each faction. Competition for retinue is one of the main aims of the factions (Hamilakis 2002, 186).

Hamilakis further stresses that factions are extremely fragile formations and that membership fluctuates, all features that distinguish this type of organization from *Houses*.

But within a *House* factions may develop or, at a particular time period, a *House* may behave like a faction. But as Gillespie notes

Utilizing the house model eliminates the problem of trying to interpret what configuration of kin or descent group occupied physical houses or house compounds, with the understanding that the house is an institution that used multiple strategies to recruit members whose everyday practices integrated kinship, economics, religion and politics (Gillespie 2000a, 15).

Jerry Moore recently added that “House societies may be found in a wide range of societies, but the institution is most evident among ranked societies transitional between kin-based and territorial-based systems” (Moore 2005, 184).

I may add that the label “House” remains very specific in our own times, especially in French where it is used to denote corporate groups that are involved mainly in production such as the House of Rothschild or as “Maison établie en 1875,” a “House established in 1875,” e.g., for the production of sweets for the royal court! But James Clavell’s novel *Noble House* or Edgar Allan Poe’s *House of Usher* are also examples! Indeed, present-day *Houses* are foremost producers, retaining names for prestige. Perhaps it would be easier to speak of *Houses* or *estates* to stress the difference between a house as a domestic unit or architectural construct and a *House* as an intergenerational locus-bound social group. It is important to stress that hierarchy is present within the *House* itself and between the different *Houses*, with high-ranking or noble *Houses* and lower-ranking *Houses*. This hierarchy is partly a result of the success with which alliances have been forged; hence wife-taking *Houses* are usually higher ranking than wife-giving *Houses* – although this particular aspect may be worth pursuing in the Cretan case – but all basic exchange systems will have resulted in asymmetrical relations.

Researchers have in the mean time, successfully I feel, applied the notion on Mesoamerican, Austronesian, Levantine (Chesson 2003; also Stein 2004) and Mediaeval social formations (Heers 1974, 49–53, notices that in Genoa they are called “alberghi” but their kin-crossing characteristics and property related characteristics make these very similar to *Houses*; see Wheaton 1977) and I suspect that the idea will soon be appropriated for Homeric society, of the Greek *oikos* or the Roman *gentes* (C. Smith 2006; see already González-Ruibal 2006 for Iron Age Europe and compare with Lehner 2000 for a related approach to Pharaonic Egypt and the patrimonial household model, also examined by Schloen 2001 for Ugarit and the ancient Near East). I would like to suggest that re-interpreting the Cretan Bronze Age evidence along these lines offers fascinating new insights and helps to explain some particularities of our evidence, namely the scarcity of clearly identifiable single-household architectural units and the proliferation of estate-like structures. I do not intend the model to last forever, however. DNA analysis and more detailed archaeological research may help to identify real (i.e. kinship) rather than optative or fictive relationships between the people that made up these *Houses*.⁵ I first list some of the characteristics of *Houses* or estates that are archaeologically visible since others such as names, titles or oral narratives stressing descent and precedence are not as easily detectable and others such as sacred songs, dances, ritual performances can perhaps only be reconstructed indirectly through our archaeological data or iconographical material (Gillespie 2000a, 11–15), an element I intend to pursue elsewhere.

The main characteristic and aim for *Houses* or estates is evidently the objectification of perpetuity (see also Moore 2005, 183). Maintaining the links between the past and the present could take many different forms.

Continuity of Place

Permanence of place may probably be regarded as the most easily identifiable archaeological characteristic with *Houses* often replacing earlier structures on the same spot. This rebuilding time and time again reinforces the localization of the group and a continuity of place. One could speak of palimpsests, the reuse of the same spot during several centuries, creating a *House* genealogy. This also takes the character of bounded space. Our Cretan archaeological record abounds with examples. Leaving aside the palaces, I simply highlight a few cases. In Crete, one finds both vertical superimposition and horizontal displacement of subsequent constructions (cf. Tringham 2000, 117–119) but both are equally important for the continuity of place. The Neolithic tell of Knossos is of course our best example since here one notices a striking continuation over several millennia of residential units on the same spot⁶ (Fig. 3.4). But Building 4 at Palaikastro likewise shows such a continuation for over 500 years between the early Protopalatial and the Postpalatial period (Fig. 3.5) and the same can be observed at Tylissos (Fig. 3.6). A horizontal displacement can be remarked at Phaistos where the Second Palace was located 20 m or so more to the east from the First. There are a few other examples. The Oval House at Chamaizi has at least four architectural phases (Davaras 1972; the building was recently restudied by Lenuzza [forthcoming]) and the hill was used, time and time again, along similar lines within the Prepalatial period. Town blocks at Palaikastro date back to at least the early Middle Bronze Age but their parameters remain basically identical till the advanced Late Bronze Age, a time span of more than 600 years. It is of course well known that many Minoan tombs were used for more than a 1000 years.

Putting people behind these years is not easy but assuming that every 25 years a generation is renewed, even a site which was “only” occupied during a single archaeological phase easily counts up to 150 to 200 years or 6 to 10 generations as is the case for Myrtos Fournou Korifi (Whitelaw 1979, 97, n. 2).

The Life Cycle of Houses

Moreover, the *House* itself is seen as a having a spirit, a living body of which the cycle differs from that of the life cycle of the individuals that happen to live in it during a particular generation.⁷ The architectural container represents stability even if it is modified, embellished, enlarged or even moved from one spot to another. Humans die, the *House* does not – but at the same time it offers its inhabitants a sense of immortality. It becomes hence important to write the biography of a *House*.⁸ Moreover, even a destroyed or abandoned house may continue to live on as a mnemonic device (see the interesting discussion by Tringham 2000). In Çatal Hüyük, for example, it was argued that molded plaster reliefs were moved from the old house to the new to assure continuity (Hodder 1999). Interestingly, anthropological parallels show that houses must be fed, by placing offerings often at the base of pillars representing the ancestors (Kirch 2000, 105), which of course brings to mind the discovery of large deposits of inverted conical cups around a pillar in Hogarth’s House at Knossos and similar installations, or the placement of altars at the entrance of the Archanes building. But so-called foundation deposits are very common in Minoan archaeology, as Boulotis (1982) has shown. Vesa-Pekka Herva recently suggested calling these *building deposits*, and argues convincingly that Minoan constructions can be regarded as persons with their own biography (Herva 2005). Independently, Santo Privitera has brought forward arguments that specific cults were organized for the *buildings* themselves during LM III, especially at Aghia Triada-VAP, Kommos, Malia-Nu and Chondros Viannou (Privitera 2004) with snake tubes serving in this view to “feed” the house directly, whereas La Rosa has explored the presence of building deposits between

MM II and LM IB at Aghia Triada and Phaistos with plenty of examples especially of special receptacles with conical cups (La Rosa 2002)! J. Soles has also interpreted some special features of Building B2 at Mochlos along similar lines.⁹ Moreover, the destruction of a house – often by fire – is sometimes a ritual act and a “burial rite” symbolically accompanying the death of the household head (Tringham 2000, 124). In some cases, burning clay implies vitrifying it and hence preserving it. This brings to mind a few Minoan cases that may perhaps be explained as such, like Neolithic Knossos, as also argued by Tomkins (P. Tomkins [pers. comm.]; see also Verhoeven 2007), the Red House at Vasiliki and parts of the West Magazines at Malia. But the pouring of calcestruzzo within the First Palace at Phaistos may perhaps also be seen as such a ritual preservation, turning it into a permanent place of memory (earthquake destructions – not so uncommon on Crete – may have been interpreted along similar lines: Driessen 1987).

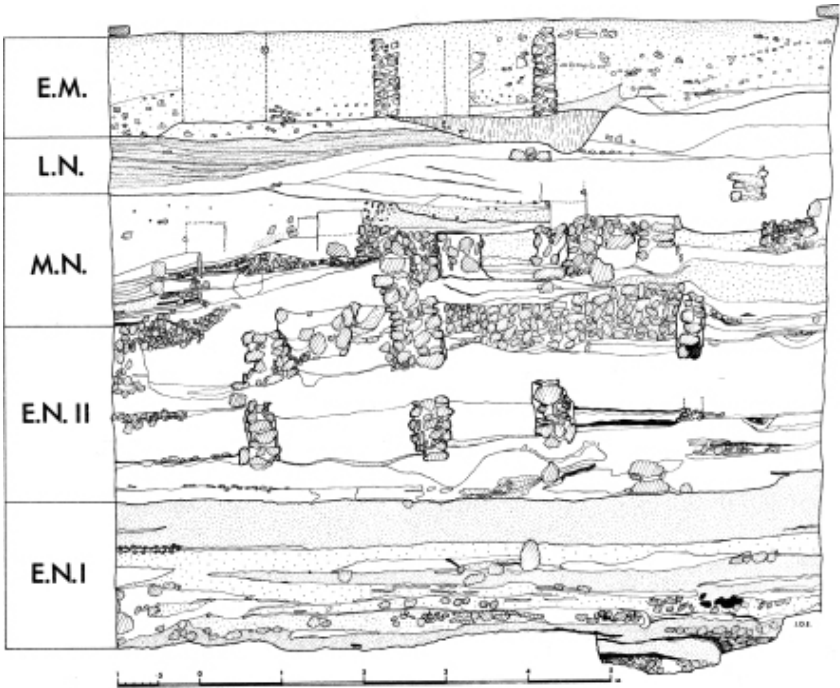


Figure 3.4. Knossos. Section of Neolithic and Early Minoan Occupation in West Court (after Evans 1972, 118 fig. 3).

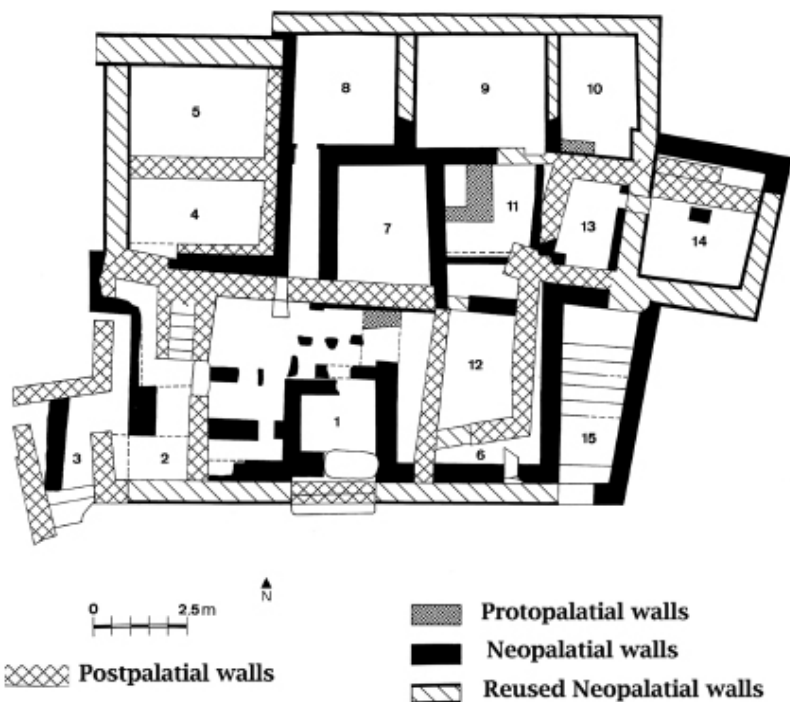


Figure 3.5. Palaikastro. Plan of Building 4 with remains of earlier and later phases indicated.



Figure 3.6. Plan of the Houses at Tyllissos with remains of earlier and later phases indicated (redrawn by P. Hacıgüzeller).

Heirlooms

The materialization of the historical memory of the *House* often happens through the incorporation of older building elements but sometimes also takes the form of heirlooms (see already Warren 1968, 190 for a list of sites where the presence of earlier stone vases especially in Postpalatial deposits was noted) of various kinds, including the bones of ancestors, and often kept in specific spaces that are charged, including ritual places and tombs. McKinnon noted: “Associated with the ancestral beginnings of the house, the heirloom valuables constitute the strength and weight of the house” (McKinnon 2000). These heirlooms may be shown on occasion of ceremonies and processions, or worn during sacred dances (see Warren 2006 and Moore 2005, 129–137 for processions). Memory is everywhere, the *House* is history. I give a few examples of Minoan heirlooms but many more surely exist even if they have not always been recognized. In Early Neolithic buildings, for example, the incorporation of axes, mortars, burned mud bricks and querns has been observed at Knossos and similar incorporations of *spolia* occur in later buildings. Economic recycling is usually invoked as explanation but a deliberate linking with

ancestors may also have been intended. Within the Kommos village, several Prepalatial stone bowls occur in Middle and Late Bronze Age contexts, three Middle Bronze Age Cycladic nipples ewers come from what is said to be a cult context in the LM IB destruction level at Myrtos-Pyrgos, an Old Syrian haematite sealstone, undoubtedly an import and much older than its LM I context, comes from House A at Tylissos (Cline 1991, 138), a Predynastic Egyptian basalt hearth-shaped jar comes from Block Chi at Palaikastro (Warren 1968, 110, no. P594), *etc.* Karytinios has also observed the presence of EM sealstones in Protopalatial tombs (Karytinios 1998, 84) and Krzyszkowska discusses the presence of impressions by older seals in the Phaistos archive (Krzyszkowska 2005, 104–105, 150, 165, 180, 194, and for the rings 215, 437). These objects have written their own biography and their importance is clear from the incremental rise of such heirlooms in the mature Late Bronze Age. For example, in the so-called Isopata Royal Tomb, which probably dates to LM II, two lamps of porphyry were found which are by the same craftsman as one found in the LM IB destruction at Archanes and another at Agia Triada, indicating that the Isopata examples would have to be LM I heirlooms. Later tombs abound in such objects. The presence of body parts may also be interpreted along these lines. We may perhaps call these *extraterrestrials* – fragments of the deceased which had either fulfilled an important part in the life of the *House* and were maintained as a continuous source of power and memory or which perhaps did not even commemorate specific individuals, as some have argued (Fowler 2004, 75–76). Amongst the examples, part of a skull found in room 89 at EM IIB Myrtos-Fournou Korifi should be mentioned as well as the human skull found in a MM IIIA level at Ag. Giorgos/Tourtouloi. Human parts were also found in the LM IA Mansion I at Petras, part of a skull in the villa at Epáno Zakros, a skull of a young woman in a room in mansion B2 at LM IB Mochlos, and Room 12 of the Zakros palace comprised the skull of a child and bones. A baby was found under a pot in a LM IIIA2 annex to Building 3 at Palaikastro. Intra-mural burial is not very common on Crete except in the Aceramic Neolithic stratum XX at Knossos (Evans 1964, 136–141) but Tina McGeorge mentions the discovery of an EM II child in a pithos at Nopigia, of a LM IA foetus buried in an inverted pithos in House I at Petras, another case in a LM II/II context in the Unexplored Mansion at Knossos (McGeorge 2003, 301–302) and a foetus beneath the floor of a LM IIIB house at Chania. Soles has also discussed the possibility of a skull cult in at least some places such as Palaikastro, Archanes, Myrtos-Pyrgos and Gournia (see, *e.g.*, Soles 2001; he also presented a Minoan seminar in Athens in May 2007 on ancestor cults). Related is perhaps the sometimes surprising nearness of tombs to residential areas; the finest example is of course Myrtos-Pyrgos, but in the Messara most tholoi are less than 200 m from the habitation site and some less than 10 m (Branigan 1998, 17–18).

Concentration of Value

Together with heirlooms, concentration of value appears as a common feature of *Houses*. Indeed the cache of valuable material objects within compounds “thereby taking them out of normal circulation and rendering them non-transactable” (Gillespie 2000c, 151) shows a focus on material objects which is in fact also reflected by the size and elaboration of the architectural structures since both serve, in an intergenerational way, to consolidate relations between people. Gillespie also noted that social differences are easily objectified (Gillespie 2000b, 21) and Joyce adds that “in the negotiation of status that typifies house societies, wealth and history serve as validations of each other, permanence in place is transformed into authority over place, and material displays are evidence of the rights to the immaterial property claimed through such display” (Joyce 2000, 211–212). Apart from

portable material wealth and immaterial richness or privileges (names, songs, *etc.*), this is also often shown by the preponderance given to storage areas – clear evidence for corporate wealth (Moore 2005, 204–205).¹⁰ This wealth (including the heirlooms) would especially from LM II onwards end up in tombs (see Whitley 2002 on antiques and heirlooms and their increasing frequency in Late Bronze Age and early Iron Age tombs)¹¹ but is characteristic for Middle and Bronze Age Minoan contexts.

From Space to Place

There is a clear link between the physical place and the surrounding landscape in which the building serves as a localizing hub for a spatial and social network (this aspect is further developed in Driessen and Frankel, forthcoming). This is perhaps most clearly shown by the transformation of residential areas into ceremonial arenas on which more afterwards. Moreover, it is the ties to the land and the locality that essentially create the kinship (Carsten and Hugh-Jones 1995, 16).

“La mémoire des pierres”

I would add a final characteristic to house societies and that is the importance of *stone* as such. Because of its permanence and antiquity,¹² stone as material embodies best the perpetuation of memory and I wonder whether the fascination Minoans showed for all things stone should not be interpreted in this way: the importance of stone pillars, or of baetyl has attracted the attention of several scholars. But to these may be added how stone, in all its aspects, is one of the most striking features of Minoan civilization: the variety and colors of stone used in architecture, vases and other objects, or imitated on frescoes and terracotta is clearly remarkable and should be seen in this light.¹³ Ashlar, for example, is perhaps a type of construction that was specially coded and only specific *Houses* that claimed a long descent could have been allowed to use this material.¹⁴

With these characteristics in mind let us return to the Minoan world and see how such *Houses* are identifiable in the field.

Minoan Houses

My basic recognition for the existence of *Houses* in Minoan Crete derives from an excavation under the direction of Alexandre Farnoux and myself at Malia (Fig. 3.7) (see Driessen and Fiasse in press). We uncovered an architectural complex, poetically labelled Quartier Nu, of approximately 25 by 32 m or 800 m², organized around a small court of *ca.* 6 by 12 m, accessible from the north. This complex was laid out in LM IIIA2, probably around 1330 BC or so, and destroyed only two or three generations later. We were fortunate to find many floor deposits and, integrating these in ARCVIEW, suggested the existence of three or four families within the complex, sharing the court as their main ritual area where a pebble mosaic floor was found, as well as a fine stone lamp and a very large terracotta house model, perhaps symbolizing the entire complex. It is also possible that the kitchen – an isolated structure to the east – was also communal as was perhaps the room opposite in which a very large grinding stone was found. Moreover, the material found in the pits around the complex can, in several cases, be linked to the different units. Although the complex shows a series of architectural modifications, its final plan is as much a result of decisions following changes in internal relations as it is a result from intergenerational reuse. Indeed, the very same spot had carried an important Middle Minoan complex, similar to Quartier Mu about 50 m to the south, the material of which was recently published by

Schoep and Knappett (Schoep and Knappett 2003). There are some badly preserved MM III remains beneath the east wing and beneath the west wing are tantalizing fragments of ashlar walls, LM I deposits and fresco fragments, implying again a building of some quality. The area remained occupied during LM II–IIIA1 at a more modest scale. It is striking how wall alignments remain identical during this more than 500 year long period and several old ones were still used when the building was finally destroyed. The idea of permanence is hence enhanced by the practice of partial renewal. Two other elements that may be relevant in this discussion may be mentioned: a series of objects – figurines, vases, sealstones¹⁵ – found within the rooms are clearly older than the final period of occupation of the complex and may be regarded as heirlooms. The most obvious is perhaps the figure of a bare-breasted lady – clearly the terracott a cousin of one of the Knossos Temple Repositories ladies! Moreover, a complete skeleton was found within the kitchen building – probably an earthquake victim – but a large skull fragment was also found in the corner of the main hall, X22–23. The latter fragment is difficult to explain – it may be all that is left of an earlier earthquake destruction victim, the rest of which was buried elsewhere, or, the skull fragment, similar to the reuse of older walls and presence of older objects, is also a heirloom, a reference to some ancestor. These different aspects are all very well represented in other attested anthropological cases of *Houses* and do indeed suggest that these heirlooms embodied a collective memory about the past at the same time serving to distinguish one *House* from another (Gillespie 2000a, 3).



Figure 3.7. Plan of Quartier Nu at Malia with remains of earlier and later phases indicated (redrawn by P. Hacıgüzeller).



Figure 3.8. Plan of Maison Epsilon at Malia with remains of earlier and later phases indicated (redrawn by P. Hacıgüzeller).

A similar biography can be reconstructed for Quartier Epsilon also in Malia, a few hundred meters to the south (Fig. 3.8): established in Protopalatial times, reconstructed and monumentalized in Neopalatial times (1370 m²) and, after a moderate LM II–IIIA1 squatter occupation, the site was again used for a Postpalatial establishment, partly reusing some of the rooms, partly reconstructing others. Epsilon seems to have its own intergenerational, circumscribed property which may have grown since Protopalatial times since the east alley was blocked and given up when house EA was constructed. Epsilon has its own set of heirlooms, valuables and integrative ritual space represented by a central hall, a lustral basin, frescoed rooms and ritual areas. It is interesting to note, for example, how one of the east rooms had a built and stuccoed circular pit, 0.75 m deep and 2.50 m diameter, filled with complete and broken conical cups, which reminds one of the Nopigia deposit (Deshayes and Dessenne 1959, 109. Bradfer-Burdet 2005 argues that it was originally a storage *kouloura*, later used as a rubbish pit). Both *Houses*, Nu and Epsilon, serve to stress that the buildings had a dual aspect: they occupy physical locations in a spatial network but also a social position as a locus within an arrangement of relationships.

The size of these two complexes, 800 and 1370 m², is large but not so unusual for Minoan architectural structures and simply translating this in people with 1 person for 10 m² gives respectively 80 and 137 people (compare with Schloen 2001, 317–333). Undoubtedly, this is oversimplifying the evidence but then we are not even including upper floor space, which certainly existed, so I think it gives a reasonably good idea of what the situation could have been. Table 3.2 translates a series of well-known Minoan architectural structures into “people” and I have followed Whitelaw’s useful annex given in the Sheffield volume. This table has little reality behind it but it is rather striking how relatively similar sizes are represented within the different settlements. In many of these examples, it can actually be shown that earlier architectural remains exist which sometimes announce to a surprising

degree the lay-out of the later architecture. Moreover, a highly structured spatial arrangement of rooms and courts was coupled to considerable care in the maintenance of exact placement, dimensions, and internal floor plan of the initial structure on the occasion of the refurbishing. But what is especially conspicuous is the surprisingly large size of these architectural structures and the same is manifest on Crete from the early Neolithic period onwards. Indeed extremely large, often agglutinated constructions form the more typical domestic structure and not, as claimed by Whitelaw, the individual small-scale residential unit corresponding to the nuclear family. I fear that the discussion was largely put on the wrong tracks by Dawkins and his so-called but-and-ben shaped house at Magasa. The sheer number of axes found within and around this structure suggests it was a temporary special-function site and not the normal type of dwelling which it is usually characterized as. Evans's discovery of large Neolithic structures beneath the Central Court is a case in point but the structures found by John Evans – although very fragmentary – also suggest that they form the remains of much larger constructs. The Early Neolithic II house in the west court at Knossos is at least 50 m² and includes at least 9 rooms, the Middle Neolithic house in the Central Court is at least a 100 m² and was, because of size and rooms, dubbed the "Great House"; the contemporary house at Katsambas is at least 65 m² and has 9 rooms. Such constructions differ considerably from contemporary Neolithic constructions on the Greek Mainland. In recent papers, Peter Tomkins has characterized the Early and Middle Neolithic at Knossos as the "submerged household" with which he implies that households were part of a larger social grouping that may have been the primary and independent unit of socio-economic organization (Tomkins 2004, 42; 2007). This is perhaps also suggested by the discovery of a large quantity of carbonized grain, interpreted as part of a storage area for a larger group at the edge of the settlement. Tomkins suggests that during the Late Neolithic, households became independent, symbolically represented by terracotta house models. He leaves aside whether these households should be seen as nuclear families or larger groupings. I would choose for the second since the house models, like the Quartier Nu example, may perhaps be interpreted as symbolizing the foundation of *Houses*. Indeed, Evans's Late Neolithic Central Court structures fit within such a hypothesis.

Site and Structure	Size	Estimated inhabitants
Tylissos, House A	575 m ²	57
Tylissos, House C	451 m ²	45
Palaikastro, House B	525 m ²	52
Palaikastro, House D3	1258 m ²	125
Palaikastro, House G1	352 m ²	35
Palaikastro, House Chi1	357 m ²	35
Palaikastro, House Chi2	238 m ²	23
Palaikastro, House B6	463 m ²	46
Mochlos, House B2	570 m ²	57
Zou	351 m ²	35
Malia, House Zb	421 m ²	42
Achladia	289 m ²	28
Myrtos-Pyrgos	251 m ²	25
Tourtouloi/Ag. Giorgos	527 m ²	52
Klimataria/Manares	486 m ²	48
Kanria/Mitropolis	424 m ²	42
Sklavokampos	396 m ²	39
Nirou Chani	542 m ²	54
Makryghialos	590 m ²	59
Vathypetro	872 m ²	87

Table 3.2. Minoan structures, size, and number of inhabitants (based on 10 m² per person).

Where Prepalatial Crete is concerned, Branigan has already drawn attention to the size of buildings beneath the later constructions at Tylissos and Palaikastro (block Chi) and we may now add Mochlos to this list. John Evans already assumed that the large EM II building beneath the West Court at Knossos was as large as the “mansion” at Vasiliki (Evans 1972, 127). Incidentally, it also reuses quern stones in its walls, as did the Neolithic buildings (Evans 1972, 117). Vasiliki would, in this hypothesis, have comprised two or three established houses, Fournou Korifi a single one,¹⁶ differentiated internally in several nuclear families but presenting themselves to the outside as a single household.

It is then no surprise that Middle Bronze Age Crete can be seen to be especially rich in large agglutinating compounds. Sometimes it is possible to identify separate residential

units within such complexes but the internal boundaries are rarely conclusive and often fuzzy. At Malia, there are several examples such as Quartier Mu, the houses south of the Palace,¹⁷ the so-called Villa Alpha and Quartier Gamma, *etc.*¹⁸ but similar community compounds exist, *e.g.* at Monastiraki, Phaistos, Apesokari and Apodulu in South Crete or at Hagia Photia and Chamaizi in East Crete. The *House* hypothesis perhaps also offers an interesting solution for the presence of specific seal types in Prepalatial and Protopalatial contexts. Indeed Karytinou – following earlier work by Sbonias – links specific seal types to particular burial buildings at Archanes-Phourni: bone seals with cross-hatching to Tholos C, white pieces to Tholos E and seals with lions and spirals to Building 19. The Archanes Script sealstones and bone and ivory seals with leaves mostly come from Buildings 3, 6 and 18, so the association between style groups and specific burials seems real (Karytinou 2000, 131). It has been noted how only a restricted number of style groups exist but that, within each group, none is identical and Karytinou is undoubtedly correct in arguing that they

were probably not used as an individual signature or name, but rather as a way to express personal status that emerged from group identity. Perhaps the leaders of each group in a community possessed a seal that showed both group identity and personal position and status (Karytinou 2000, 131).

Is it possible that each established *House* had its own seal stone type and that either real or putative alliances can be identified within the more discrete presences of other types? The hypothesis is certainly worth pursuing.

Where Neopalatial Crete is concerned, I propose to interpret the so-called “villas” – both urban and rural – as *Houses*, allowing for a difference in status amongst these: high, middle or low but interconnected through a network of alliances. For some *Houses*, we may even play with the idea of *noble Houses*. Within the towns, the recognition of these *Houses* allows, I think, a tantalizing new reading and interpretation of the evidence. Indeed, in the major Neopalatial towns, a number of large constructions distinguish themselves by the presence of what we may call ritual space – courtyards, lustral basins, Minoan halls, pillar crypts, balustrades, *etc.* If we regard these constructions as the main focus for a localized *House* group, the ritual space becomes more intelligible as an *intermediate* integrating device for group-related ceremonies (compare with Stein 2004, 76), also explaining why there are several of these and why their concentration is usually higher closer to the main ceremonial centre represented by the palace which served the entire community. This seems to be the case at Knossos, Malia,¹⁹ Mochlos, and especially at Palaikastro (Fig. 3.9) where the finest constructions may be considered as forming the core of *noble Houses*, as MacGillivray and I have already argued in 1989 (Driessen and MacGillivray 1989, 107). As with the Peruvian *ciudadelas* or noble estates, these neighborhoods incorporate multiple residences and were the “setting for the maintenance and transmission of memory through ceremony” (Moore 2005, 207). In all these towns, the locations of structures were maintained over long periods and their placement within settlements highly curated. In the case of Palaikastro, for example, Blocks B, Gamma and Delta are striking because of several features:

- each of these blocks carries a Palaikastro Hall in its centre,
- each block has a single larger unit and several smaller units
- the overall sizes of the blocks are similar
- although several entrances exist, it is no easy exercise to distinguish between individual households within the different town blocks.
- ritual equipment was found in each of the blocks

- although the main unit is externally the most monumentalized by the presence of ashlar or special room types, valuable objects are more evenly distributed throughout the block.



Figure 3.9. Town plan of Palaikastro (J. Driessen).

All this suggests indeed that these blocks formed *Houses* which, between the late Prepalatial and the Postpalatial period, served as the locus and focus of corporate groups. Hence, the physical locus “doubles not only as principal residence and key social unit, but also as the main center of ritual action” (Kirch 2000, 106). Cohesion reinforcing rituals then may have taken place within rooms such as the Palaikastro Halls or within enclosed open spaces. The best Minoan iconographic evidence indeed stresses this communal aspect, most often taking the form of feasting in communal meeting places, where ritual activities took place which also implied the distribution of prestige goods and this following a repeated, precise order to be religiously sanctioned. In this view, the Minoan “palaces” represent the ritual architecture by which the ideologies of production, exchange and consumption are articulated and materialized.

Interpreting these town blocks as *Houses* and as long-lived entities means that the locus can be regarded as a major social, political and economic actor at the same time as seeing the *House* as such as the proprietor of perpetual rights and duties. Some of these *Houses* may have regarded themselves or been regarded as *noble Houses* because they owned considerable immaterial and material estates and undoubtedly their own burying grounds and forms, pasturing zones and perhaps even fishing and hunting *terroirs*. Detailed archaeobotanical and archeozoological work may perhaps in the future show whether *Houses* even controlled different types of resources. Where the rural “villas” are concerned, it will have to be decided to what degree these were really new constructions and not reconstructions of older buildings. More tests are needed since, whenever these have been made, the prior existence of architecture has been established, and, to be correct, I know of very few where an earlier phase does not exist. Interestingly, the evidence for pottery or other artisanal production, *e.g.* at Zou, Pitsidia, Vathypetro, Zominthos, Nirou Chani, Sklavokampos may suggest that these together with Tourtoulou, Achladia, Kannia-

Mitropolis, Nerokourou and others, represent the normal production mode. It is hence not *Domestic Mode of Production* but *House Mode of Production*! The *House* hypothesis also leaves room to interpret some sites perhaps rather differently than has hitherto been the case. For example, Myrtos-Pyrgos is usually seen as a small settlement with an elite building, a series of common houses and a tomb. Seeing the site in its entirety as a *House* blurs such a hierarchical construction to the advantage of a more dynamic situation in which all inhabitants were linked to the place through time and with this link perpetuated through the continuous care given to the House Tomb and the mansion with court serving as their integrative ceremonial zone.

During the Neopalatial Period, rivalries between *Houses* – and perhaps within – seem to have intensified, showing an increasing investment in prestige artifacts. Probably aggravated by natural and economic conditions, these rivalries may have resulted in the LM IB destructions, when several *Houses* may have perished, others survived and others relocated. New *Houses* may have been created, helped by the new sources of wealth and alliances with mainlanders. Most striking, however, is the fact that, especially at Knossos, smaller architectural units exist during LM II–III and that progressively such smaller residential units become more common. I wonder whether this can be interpreted as a deliberate move by the Knossian administration to break down such traditional locus bound associations. In more rural areas, however, some *Houses* are revitalized afterwards as at Malia, Amnisos, and Palaikastro. At the same time, one sees what perhaps may be interpreted as relocated *Houses* in places such as Chondros Viannou and Gouves. It is interesting to see that in our Linear-B tablets, two words especially relate to houses: *wokos* or *woikos* (attested as *wokode/woikode* – to “the house of” [TH Of 36, KN As 1517]) and *don* (attested as *donde* “to the house of” [TH Of26, 31, 33]). Is it possible that *woikos* still meant estate or *House* and *don* the individual nuclear family house? It would offer an interesting alternative for the “collectors” interpretation that is usually put forward (see the different papers in Olivier 1992). Incidentally, *oikos* is related etymologically to *vicus* – the neighborhood! I believe that many of the *Houses* continued into the historical period and beyond (see already Driessen and Fiasse forthcoming). In fact, Athanassia Kanta has recognized a similar organization in a few traditional Cretan villages even today²⁰ and Moody and Rackham also mention a village in which a supra-household level seems to have been the norm.²¹

Multilocal House Groups?

Finally, I want to offer some preliminary ideas on the possible existence of multilocal *House groups*, dispersed over a series of even nonadjacent communities, and thus contributing to a social and symbolic landscape that exists within and through the identifiable settlement network (Driessen and Frankel forthcoming). Anthropological parallels show that the *House* is

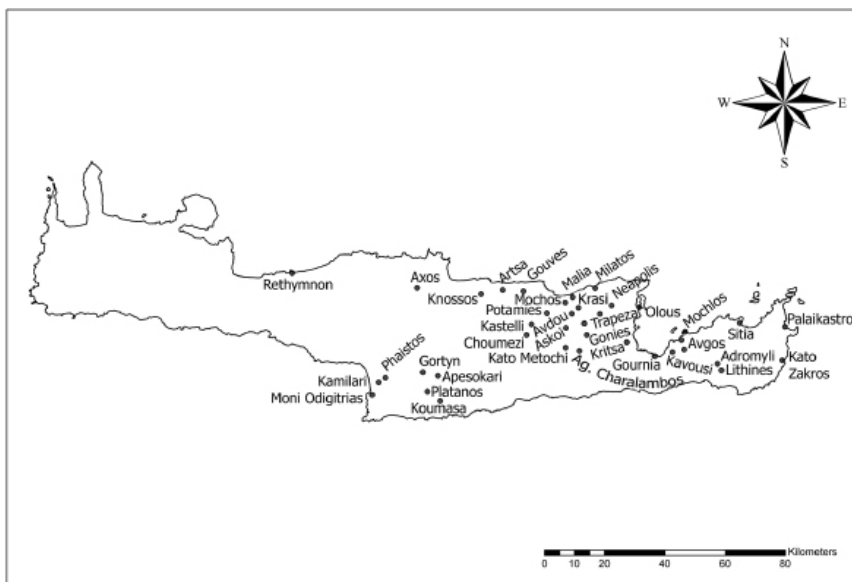


Figure 3.10. Distribution of seals of the Middle Minoan Malia Workshop (redrawn by P. Hacıgüzeller).

often a residence but is not always shared by all house members, who may be dispersed among various dwellings, even in different localities. Rather than a domicile, it may be a shrine, or as a sacred place it may constitute a fusion of both functional categories (Gillespie 2000b, 47).

This may imply that *House* membership is only explicitly shown on occasion of certain specific ceremonies. This reminds me of one of the major families in present-day Palaikastro: the Kafetzakis family includes about a dozen families in Palaikastro itself – some wealthy, others not – but with branches in Magasa, Roussa Ekklesia, Sitia and a few other nearby villages. They meet for special feasts, especially marriages, funerals and some other occasions. This example may perhaps serve as a parallel for the progressive dispersal of seal types from the core area to surrounding villages during the late Prepalatial and early Protopalatial period, as has been shown by Sbonias for the Messara and by Poursat and Papatsarouha for the Malia seals (Fig. 3.10).²² If seal groups do indeed represent *Houses*, their distribution may then imply proliferation of the *House group* from the core area to peripheral villages or, in some cases, to outlying areas.²³ Iconographic themes may then correspond to *House groups*, remaining important throughout successive periods, and perhaps even becoming dispersed over a town, region or island – if not beyond.²⁴

Conclusion

In this paper I have proposed to regard major Minoan *Houses* as social groups. I certainly did *not* want to argue that the *House* was the *only* form of social production (and reproduction), but I do think it was probably the most important. Less successful *Houses* – or following interventions from some authority – may have fissioned or disintegrated into first extended and eventually nuclear families. I have argued that an intergenerational investment by a corporate group in an estate constituted by an architectural structure, its domain, its heirlooms and valuables formed the basis of Minoan social relations. This

common goal ensured the perpetuation of memory. The estate or *House* identified both the group and the individual members. The unity of the architectural form expressed the unity of the corporate group or residential association.²⁵ I have also indirectly argued for a slow evolution and a high degree of conservatism in Minoan society between the Neolithic and the Late Bronze Age in which continuity of place played a major role. Where political economy is concerned, a reconstruction of Minoan communities as essentially *House* societies has important consequences, related to the objectification of perpetuity since valuable objects bestowed prestige on the *House* and its descendants.²⁶ The *House* also inserts a level in the production and consumption process that is larger scale than what has been called the domestic unit of production (and consumption) and smaller scale than the settlement as such (compare with Day, Relaki, and Todaro, this volume). It also allows us to see attached specialists working for a particular *House* or allied *Houses* and to see elaboration as some kind of internal peer interaction, emulation and competition.

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Notes

I owe this parallel to T. Cunningham.

¹Whitlaw 1979 and the paper based on this work: Whitlaw 1983; I thank T. Whitlaw for a copy of his thesis, handed over – perhaps unconsciously – while we were both suffering from an excruciating hangover after the Knossos 2000 closing party in Iraklion.

²I thank D. Catapoti for the permission to mention Catapoti 2006 which she is soon offering for publication.

³For the sake of comprehension, I have consistently italicized and capitalized the word “*House*” when denoting a social rather than an architectural unit (except where it was italicized in the original publication).

⁴See, e.g., Watanabe’s (2004, 160) critique on the application of the *House society* model for the Maya. We remain ignorant about Minoan kinship relations and badly informed about Mycenaean ones; see, for example, Carlier 1999, noticing how kinship mentions are extremely rare in Mycenaean archives; moreover, the so-called “fathers” especially on PY Aq 64+218, may perhaps also be interpreted as *House* names rather than as direct descendants.

⁵One may even wonder whether intentional burning was not part of a perpetuation act to consolidate *House* remains or as part of “burial rites” when an important person had died (Tringham 2000, 124).

⁶Anthropological parallels show that houses are often denoted in a similar way as human bodies, much in the same way as later Greek (and many contemporary language) uses body parts to denote vase elements.

⁷But as Gillespie 2000a, 3 remarks: the constructions that act “as the focal point for group identity often outlive the specific individuals who first created or used them, they are constantly subjected to resignification, and the portable objects and houses may be moved about in the process.”

⁸Soles 1999, 57: “The objects from the building also suggest a ceremonial use. They include a large number of conical cup lamps placed in what appears to have been some kind of luminary ceremony on the terrace outside the pillar crypts and near the altar-like structure located on the terrace”; Soles

2004, 159: "The most important of the renovated structures in the main settlement area was the new ceremonial building. Building B.2 was erected on either side of a prepalatial building. It seems to have been designed in such a way as both to honor dead ancestors and provide a cosmological link between the living and the dead. [...] The façade was set back towards the center of the building where the prepalatial remains were located in order to leave an open space above those ruins [...] A small altar was set in this space directly above the area of the prepalatial building."

It is interesting to observe how on the North Coast of Peru, the larger storerooms of the earlier periods were sometimes replaced by smaller rooms in which more precious elite commodities were kept. The absence of storerooms from most Neopalatial houses around the Palace at Knossos may perhaps be seen in this light.

See Whitley 2002 on antiques and heirlooms and their increasing frequency in Late Bronze Age and early Iron Age tombs.

See also Joyce (2000, 200): "Stone is a particularly important medium for materially anchoring history in many house societies ... The most important stones ... mark boundaries and ... may contain the spirit ... of an ... ancestor."

Joyce (2000, 203) notes how a "Yurok woman retained a grinding stone from the building used by one of the houses in which she claimed membership."

T4 Cunningham informs me that Venetian houses had similar rules during the late Renaissance. Compare with Carsten and Hugh-Jones 1995, 12: "... decorative elaboration of the house's external façade, sometimes taken to extreme proportions ... may serve as a sign for the inhabitants' identity, wealth and powers and as a vehicle for the conspicuous display of mythologically sanctioned powers prerogatives reminiscent of the heraldic devices of medieval houses."

The clearest examples are a Middle Minoan fruit stand reused as "snake tube" together with a small LM I amphora in room 6, a stone offering table, lamp and chalice, Middle Minoan and Late Minoan I seal stones as well as the Lady of Malia who is probably also Neopalatial.

The EM site of Debla (Warren and Tzedakhis 1974) constitutes a hamlet of two or three independent constructions; these are, however, located so closely to each other that they clearly indicate a close-knitted group; see the remarks by Moore (2005, 9–48) on soundscapes and the link between voice and social cohesion in non-hierarchical societies.

The presence of fire pit areas within the structures south of the Malia palace may suggest that each area was occupied by a different social unit, perhaps a nuclear family but this within the larger framework of the *House*.

Shoep (this volume) calls these "elite groups" but the present hypothesis leaves more room for high *Houses*, intermediate *Houses* and low *Houses*, participating differently in the internal power game.

Cutting (2006, 226) also mentions unpublished work by D. Romanou at Malia, using syntax analysis, stressing that each structure sheltered "a primary co-residential group."

Ranta (1983, 156): "... Selino, where the villages, going back many centuries, are arranged in neighbourhoods scattered over a considerable area. Each neighbourhood corresponds to an extended family or clan."

Ethnographic evidence notes that in a chiefly village of about 1000 people there can be as many as 15 *chiefly* families, each with its own *chiefly* residence and associated ritual area; each represents the one of several lineage heads in the village and these may have had political or kinship relations or alliances with other villages (Flannery 1998). It were these elite families that also attracted families that had been less successful into an alliance, partly to intensify production to create economic surplus, which could be used to maintain part-time attached artisans and to organize extra-regional exchange. By attaching production and controlling specific types of objects or vases that were used in specific ceremonies as well as their distribution during these ceremonies, alliances were forged.

Sbonias (1995, 54–67) for the Lion-Spiral Group made of ivory that occur in Archanes, Moni Odhigitrias and Platanos; Sbonias 2000 for the different groups as well as Poursat and Papatsarouha 2000; further study may help to distinguish between different subgroups amongst these *ca.* 500 sealstones, perhaps with an animal style group, a human figure group and a bucranium group. See already Blasingham 1983, 16–18, noticing how "several motifs appear in two or more tombs of a cluster, leading to the conclusion that either the tombs were not the property of homogenous unilineal descent groups or that the motifs of the seals do not represent kinship per se. In the former case,

ownership of the tombs would have to be assigned to villages; and a person's alliance to his community would have been more powerful than to his kin group in matters of death and burial." She decides, as Younger does (2000, 355) that the "seal motifs represent political office or social rank, or both at once" (Blasingham 1983, 18).

Younger 2000, 349. As argued by Younger, larger seal groups probably identify settlements or regions and he adds as examples the Zakro workshop, the Vapheio Lion group (Argolid) or the Spectacle-Eye group for LM II-III A Knossos, claiming that seals "like modern coins, were period-specific, country-specific and administration-specific."

Younger (2000, 253-355) already hints at this possibility with identical or similar seals being used by officials for the same administration or continuity of office; if an identical seal theme implies the same *House* being involved this may be easier to understand.

Compare with the *GENS* label given by Hayden 1995, 19 (with *GENS* standing for *group exploitation of nucleated subsistence*).

See also Carsten & Hugh-Jones (1995, 19): The *House* involves elements of kinship but is "... no less 'about' economy and just as much about joint subsistence, production and consumption as it is about property."

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MAKING ELITES: POLITICAL ECONOMY AND ELITE CULTURE(S) IN MIDDLE MINOAN CRETE

Ilse Schoep

Introduction

Elite culture, or as Baines and Yoffee call it, “high culture” (Baines and Yoffee 1998, 2000) is an important aspect of political economy because it forms the material expression of a strategy aimed to maintain and legitimize social order and hierarchy. The development and maintenance of high culture is pervaded by ideologies of order and hierarchy and, within that order, by legitimacy that underpins order in social and political terms and by wealth, which sustains both order and legitimacy (Van Buren and Richards 2000, 4).

In this paper I will examine the question of elite culture on Crete in the MM I–II periods: how it was generated, what form it took and how it was consumed. On Crete, elites become more visible in the archaeological record from Early Minoan II onwards, when more and more stone vases and metal objects are deposited in the tombs (Branigan 1974, 106; Nakou 1995). However, from the early Middle Bronze Age onwards they become especially visible in settlement contexts through the construction of monumental residences, which now seem to be an important arena in which social power was played out. Although iconographic evidence is limited for the MM I–II periods there is plenty of evidence in the way of pottery, sealstones, metal objects and architecture that points towards the intentional production and manipulation of forms of material culture that embody elite culture. This process greatly intensifies in the Neopalatial period, when there is an explosion of elite culture in which iconography plays an obvious and integral role. Depictions on frescoes, stone vases, signet rings and sealstones seem to emphasize the role and place of elites in the cosmic order.

Models for the Production of Elite Culture

The Palace-Centered Model and Its Implications

On Crete, elite culture has always been closely connected with the Minoan palaces, which are traditionally regarded as the centralized seat of a religious, economic and political authority and therefore as the dominant force in Minoan society, directing and enforcing change (Renfrew 1972; Cherry 1986). Thus, several innovations at the beginning of the Middle Bronze Age such as the appearance of script, the fast-turning potter’s wheel and palatial architecture are traditionally attributed to the emergence of the palaces in MM IB (Watrous 1987; Dickinson 1994; Cadogan 1980; Cherry 1986). Recent discoveries have made clear, however, that the so-called MM IB emergence of the palaces is in fact just a phase in the biography of these buildings (Schoep 2004, 2006), which at Malia (Pelon 1999), Knossos (Wilson 1994), and probably also Phaistos (Todaro, forthcoming) go back much further in time, respectively to EM IIB and EM III (North-West Terrace). Elsewhere, such as at Petras, the palace seems to have been constructed later, in MM IIA. Consequently,

it is not the emergence of palaces *per se* that can be held responsible for the innovations that we see appearing at the beginning of the Middle Bronze Age but developments that took place against a background of these pre-existing buildings (and institutions). Since these innovations occur at the same time as elites become more visible in the settlement, I have argued elsewhere that an alternative model, one which gives a more central role to competing elite groups, not simply a palatial elite, provides a more convincing explanation of the present data (Schoep 2006).

The traditional palace-centered view, where the palace is viewed as the driving force in Minoan society, has been influenced by several factors. First, the overarching control that is associated with these buildings reflects in the first place what we know of the later LM III palaces and their elaborate administrations, an image modeled on and inspired by the Near Eastern models and then projected indiscriminately back onto the Minoan palaces (Schoep 2002a, 2002b). A second influence was the desire to model Crete as rivaling the splendors of Near Eastern society (Papadopoulos 2005), which has encouraged a vision of the Minoan palace as the (magnificent) residence of a ruler, the home of an elaborate and far-reaching bureaucracy and even the center of a state. Third, because of the general lack of other independent cult buildings, the religious sector of society has been housed under the same roof as the political and the economic sectors, so intertwining them that it is commonly believed that these sectors were one and the same institution directed by a single authority (Schoep in preparation). This palace-centered view explains the existence of a Middle Bronze Age palatial elite controlling the production of elite culture and access to and control of international exchange networks (Cherry 1986). Confirmation of this model was seen in the discovery of high-quality and sometimes exotic objects in these buildings. This belief is reflected in the common use of the terms palatial and non-palatial or provincial to refer to respectively high- and low-quality goods. The view that high-quality objects must have been produced under palatial (or central) control is strongly embedded in Minoan studies. Typical would be Walberg's conclusions regarding Kamares Ware:

The Kamares Style is a sophisticated palatial style and could only have been produced in the social surroundings of the palaces. Their organization and economy could give the potters and painters opportunities of specializing and experimenting and relieved them of the need to devote themselves to dull mass production (Walberg 1976, 126).

A similar view underlies Weingarten's assessment of the EM III–MM IA Parading Lions/spiral Complex sealstones: "The date disputes the term 'palatial' but the seals certainly have the quality and homogenous feel of a workshop under central control" (Weingarten 2005, 763).

Towards a Non-Palatial Model

Setting aside the question of whether the palaces were residences of a palatial elite, as the traditional model holds, or largely ceremonial centers, as argued recently (Schoep 2002b; Driessen 2002), it is no longer tenable to identify a palatial elite as the main agent in Bronze Age society. There is clear evidence for production taking place not only outside the palaces but also outside palatial centers (Schoep 2006). Studies have shown that a considerable proportion of the MM II Kamares Ware consumed at Knossos was imported from the Mesara (Day and Wilson 1998). In MM IB fine, highly standardized tableware produced in the Pediadha was consumed in the palace of Knossos (Rethemniotakis and Christakis 2004) and the consumption of imported pottery seems to have been a long-standing tradition (Wilson and Day 1994). The tradition for high-quality pottery to be produced in non-palatial settlements (and workshops) can be traced back to the Early Bronze Age (Kiriati,

Day and Wilson 2000; Day, Relaki and Todaro this volume). Independent, non-palatial production can also be identified for other artifacts. An important workshop producing white paste sealstones and scarabs (Pini 1990, 2000) between EM III–MM IA (Yule 1980, 209–210) or MM IA and MM IIA (Weingarten 2005, 761) has been located in the Mesara. Other workshops such as the EM III–MM IA parading lions/spiral complex group (Yule 1980, 208–209) do not seem to have been located in a known palatial center. There is also the example of the Atelier de Sceaux in Malia, closely connected with the elite complex of Quartier Mu and not the palace. Few workshops of stone vases have been excavated but one was found in Quartier Mu (Poursat 1996) and more recently an EM II workshop (EM II) was found at Mochlos (Soles 2005, 13). If indeed the latter produced the high-quality pieces known from the tombs then there is no reason to assume that high-quality products could only have been made in palatial workshops. In addition, Branigan has pointed out that the majority of metal and exotic objects are attested in non-palatial contexts, thereby questioning the role the palaces played in exchange and trade (Branigan 1989). Branigan (Branigan 1974, 127) also tentatively identified local metallurgy workshops in the Mesara (Platanos and Koumasa). The discovery of a metallurgy workshop at Chrysokamino (Betancourt 2005a, 2005b) showed that metallurgy was a complex process involving different stages none of which need have been under palatial control (Haggis 1999). The same may perhaps be suggested for the workshops producing the metal jewelry and status symbols found in EM II–III tombs.

The above suggests that high-quality luxury products can and were indeed produced in non-palatial contexts and workshops. Therefore, designations such as “high-quality” and “luxury goods” should not be considered as synonyms for “palatial production or palatial workshops.” While there is no evidence for production within the EM III–MM II palaces, palatial settlements such as Malia and non-palatial settlements such as Poros-Katsambas, Archanes (Phourni), Ayia Triadha and Kommos were inhabited by elite groups who seem to have played an important role in the consumption and exchange of elite material culture in the Middle Bronze Age (Schoep 2006).

Elite Culture and Peer Polity Interaction

The application of Renfrew’s Early State Module to Crete assumes the reduplication of similar or identical spatial patterns in different geographical regions and evenly-spaced, autonomous central places whose territories comprise an area of *ca.* 1500 km², with a mean distance of 40 km between the central places of neighboring modules (Renfrew 1986; Cherry 1986). Social complexity is seen to develop as a result of interaction between autonomous, equal-sized polities, with similar developments taking place at more or less the same time. This interaction is also known as peer polity interaction (PPI: Renfrew 1986; Cherry 1986) and similarities in elite culture over the island was considered to be the result of peer polity interaction, whereby palatial elites were exchanging goods and practices (Cherry 1986).

The peer polity interaction model, however, assumes that the development of complexity held equal pace across the island and that Cretan polities enjoyed equal or symmetrical power relations. In the last two decades it has become increasingly clear that neither of these assumptions actually hold. The notion of a single horizon of emergence for the Cretan palaces is rendered unsustainable by the divergent biographies of the various excavated palaces. While some palaces were indeed first constructed in MM IB (Phaistos), others are older (Malia and Knossos) or younger (Petras). At Malia a large building with central court already existed in EM IIB and at Knossos the EM III North-West Platform

forms part of a monumental predecessor to the MM IA palace. In Petras, a small court building was constructed in MM IIA, after a reorganization of the buildings on the hill on which it was built (Tsipopoulou 1999). That different regions followed different trajectories is also suggested by the survey data (Driessen 2001).

The variation in the size of these palaces seems to mirror variation in the size of their surrounding settlements and the density of occupation in the surrounding regions. The picture of peer polities clearly needs to be nuanced. Besides the older palaces in large urban centers such as Malia and Knossos, there were smaller more recent palaces at Phaistos, Petras and perhaps Monastiraki, which were perhaps shaping themselves on the example of the former. The expenditure of energy in the construction of impressive walls at Monastiraki, Petras and Myrtos-Pyrgos is perhaps a sign of small, more recent and consequently vulnerable polities.

Rather than a few large peer polities, as implied in the well-known map drawn by Cherry (Cherry 1986, 21 Fig. 2.2), the above discussion suggests the existence of a patchwork of large, medium and small polities. In each of these, differing ecological and historical factors influenced the development of spatial and social structures and their internal dynamics. The spatial configuration of the Knossos region is very different to that of Malia because it is characterized by the existence of several large centers: Knossos, Poros-Katsambas, Archanes and probably also Tylissos. The development of these centers and their internal dynamics may have been defined by historical and ecological factors. Knossos may have become so important because of its long history (Day and Wilson 2002), but more importantly because of its central position within the Heraklion basin and its proximity to Poros-Katsambas, an important harbor since the EBA (Dimopoulou 1997; Dimopoulou-Rethemiotaki 2004). The proximity of Archanes to Iouktas and to Poros may account for its importance (access to Poros via Kairatos?). Spatial configurations in the Malia region were different, because Malia was a coastal site that may have had several harbors in the MBA. The Malia survey did not find any evidence for sites comparable in size to Malia, most sites being small villages and hamlets. The only possible exception is Sissi, which was located at the crossroads of several roads. Like Malia, Petras was the largest site in its surrounding region (Tsipopoulou 1998, 1999). It seems inevitable that these different spatial configurations would give rise to different power dynamics.

In other regions (Pediadha, the extreme North-East and South-East of Crete, West Crete, Lasithi plain), there is no evidence so far that palaces existed in the Middle Bronze Age. The regions or sites without palaces are in the palatial model usually subordinated to the nearest palatial center, but alternatively they might have followed alternative socio-political trajectories which may have been structured in a different way. As far as we can tell at present, the MBA palaces (*i.e.* monumental buildings with courts that formed the focus of a center) seem to be a feature of central and central-east Crete. Their distribution in the early Middle Bronze Age may be connected to north-south and east-west communication networks.

Judging from settlement patterns and settlement density, there can be no doubt that considerable differences existed in scale, organizational principles, complexity and interregional contacts between the various Middle Bronze Age polities. This would have resulted in a marked asymmetry in power relations between different polities, a situation mediated by the forging of alliances. This power imbalance is important because of its influence over how local elites differentially accessed non-local resources and thus the production and consumption of elite culture on the one hand and the dynamics between different elite groups on the other.

Identifying Elite Culture on Crete: Towards a Methodology

How does one identify elite culture? According to Baines and Yoffee (Baines and Yoffee 2000), high culture is the translation into the material realm of an elite ideology aimed at affirming the necessity of a ruling group to the maintenance of the cosmos. This happens through the production and consumption of aesthetic items under the control of, and for the benefit of the inner elite. In addition, high culture sets a high value on the exclusive and expensive (Baines and Yoffee 2000). It is important to note that Baines and Yoffee make a distinction between an inner elite and a sub-elite, implying the possibility of hierarchical differences within and between elite groups.

The application of Baines and Yoffee's definition of elite culture to Crete is not without its problems. The aesthetic qualities of an object are notoriously hard to gauge objectively. A good example of this problem is the traditional interpretation of high-quality fine pottery as an elite product, an issue well documented for the Attic red and black figure pottery (Vickers and Gill 1994), but equally relevant for the Cretan Kamares Ware. Was Kamares pottery really an elite product or was it something more widely accessible? It is well known that elite culture is practiced by those who hold real social power ("inner elite") but that it may also be imitated by aspiring elites and the "sub-elite" (Baines and Yoffee 2000, 16). Archaeologically, it is not always easy to distinguish between these different agencies since it is not always obvious to determine when access to innovative products, practices and knowledge becomes more widely spread. This is at least partly caused by the dearth of excavated production contexts on Crete and the uncertainty surrounding the organization of craft production. As the data stacks up against the palatial production model, so our ignorance of how elite culture was produced becomes all the more frustrating.

Another aspect that must be taken into account is the regional differences that may occur in elite culture. This is a direct result of the differences in scale and complexity between different regions and of non-peer polities (see below), something that becomes very clear when comparing the remains of elite culture in different areas (see above).

Quartier Mu and the Identification of Elite Material Culture

One way of addressing the question of what constitutes elite culture in MM I–II Crete is to start from a known elite context in order to gain a picture of what elite culture looked like and how it was produced, exchanged and consumed. The excavations of Quartier Mu at Malia provided an excellent example elite practice (Poursat 2002; Poursat and Knappett 2005; Schoep 2002a, Schoep 2006). By carefully assessing the production, exchange and consumption of material culture in this building complex, we can get an idea of the material correlates of elite culture.

The excavation of Quartier Mu revealed that the resident elite had interests in a range of activities:

- attached craft production
- storage of agricultural goods (agricultural exploitation plain)
- storage of finished goods (stone vases, metal objects, metal objects)
- acquisition of imported commodities (Mesara and Mirabello storage vases)
- access to Egyptian iconography: cat in nilotic landscape, sphinx, falcon lid
- innovative technologies: appliqué pottery
- architectural embellishment of main building with innovative architectural techniques (ashlar) and new architectural modules such as Minoan Hall and lustral basin

- sealing and writing
- feasting.

Buildings A, B and D testify to the storage and consumption of goods, not only of agricultural products but also of valuables. Valuable finished items stored in particular locations (also called *réserve-trésors* by Poursat and Knappett 2005, 172) especially in Buildings B (IV4, V5/V6) and D (VII2–4). They include a metal dagger and metal bowl, figurines, numerous stone vases, metal tools, raw materials. In addition, the number of magazines and storage rooms clearly point towards agricultural exploitation and land ownership in the Malia plain. This micro-economy was managed in part or in whole through the use of sealing and writing. The Mu elite also took an active part in production, as suggested by the satellite position of the workshops around Buildings A and B, their dependence on the latter in terms of raw materials, and their specialization (Poursat 1996). The craftsmen would thus have been attached specialists, concentrating on the production of particular goods for a market dictated and perhaps controlled by the elite of Quartier Mu.

Production

Quartier Mu forms the only well documented example of attached craft production in the Middle Minoan II period. This production involved a particular type of sealstone (prismatic three-sided sealstones) in the Atelier de Sceaux, appliqué pottery in the Atelier de Potier, metal tools in the Atelier de Fondeur and stone vases, especially kernoï and libation tables, in the Atelier de Potier and the Atelier Sud (Poursat 1996). There is, however, no evidence that the Mu dagger with the gold inlaid handle was actually produced in the Atelier de Fondeur although the presence of bellows, crucibles, and tuyères suggests that metalworking was taking place in or around Quartier Mu. The Atelier de Fondeur seems to have been specialized in the production of utilitarian objects such as axes and chisels, examples of which were also found in buildings A and B (Poursat 1996, 70, 152). Thus the well-known high-quality metal objects from Malia in the Heraklion Museum, such as the Chrysolakkos gold bee pendant, the Mu dagger with the gold inlaid handle and the swords from the palace (in particular the one with the so-called acrobat) were most likely produced elsewhere, perhaps in the same Maliote workshop. The “egyptianizing” character of these high-value luxury products links them to the terracotta appliqués found in Building D of Quartier Mu (Poursat 2000b, 29–30). These consist of a terracotta sphinx with Cretan hairstyle (Poursat 1973–4), a falcon lid, a jug and two cups with appliqués of a cat in a nilotic landscape, and a bridge-spouted jar with an appliqué of a pregnant female (Poursat and Knappett 2005). It cannot be excluded, however, that these terracotta appliqués to which we attribute a high symbolic value, were actually imitations in a cheap material of more valuable metal vessels and objects. It is not certain where these appliqué vases were produced but moulds of shells and marine elements were found in the Atelier de Potier, and it cannot be excluded that the egyptianizing appliqués had also been produced in this atelier. It seems then that although the Mu workshops may have been responsible for some of the high-value items stored in the main buildings, their main line of production was items that were valuable but not elite culture *per se*, such as bronze tools (Poursat 1996, 70, 152), stone vases and sealstones.

The fact that the workshops of Quartier Mu were not exclusively aimed at the production of luxury goods for elite consumption raises the possibility that the bulk of elite-administered production was targeted at persons of lesser status, such as retinue and dependent workers. Quartier Mu was by no means the only producer in Malia, although (so

far) no secure workshops have been identified. Potters' wheels have been found in Epsilon, Theta, Building Beta and the area of Chrysolakkos (Evely 1988; Poursat 1996, 153); a mould for a double-axe comes from a proto-palatial level in House Epsilon (Deshayes and Dessenne 1959, 113). Quartier Theta near the beach also seems to make sense as a production context. The architecture is ordinary and so is the largely undecorated pottery found in the rooms. A tuyère, crucibles, bone tools, a tournette with stand, bronze needles, lamps, a possible hearth and oven point towards the possibility that this was a family workshop, as suggested by the excavator (Van Effenterre and van Effenterre 1976, 95–96). Another likely workshop context, located by the Malia survey, is associated with a large complex with cut limestone blocks, column bases, wall plaster and a Cretan Hieroglyphic bar (Müller 1991, 743; Müller and Olivier 1991, 65). The presence of tools, loomweights and murex fragments perhaps suggests textile production. The storage in large quantities of finished goods such as stone kernoi and libation tables in Quartier Gamma (Demargne and Gallet de Santerre 1953) may also suggest a specialized rather than a domestic function. Quartier Gamma, furthermore, yielded evidence for the production of wine or oil (Demargne and Gallet de Santerre 1953), and the excavators also mention moulds (Béguignon 1931, 513).

Consumption

The items consumed in Quartier Mu provide corroboration for this picture of multiple levels and agencies of production in Malia. Although some objects were obviously produced in the workshops (three-sided prismatic sealstones, bronze tools, stone vases), the majority however was not (cf. Poursat 1996, 152). Thus not all the sealstones found in Buildings A and B seem to have been produced in the Atelier de Sceaux and while some were probably from an older Maliote workshop others may have been imported (Poursat 1981, 162–163; Detournay, Poursat and Vandenameele 1980, 189–190). Two faience sealstones may also have been the product of another local Malia workshop, one that was following fashions at Knossos and Phaistos (Poursat 1981, 163). The inscribed sealstones used to impress clay documents are usually of different shapes, materials and repertoire than those attested in the Atelier de Sceaux (Detournay, Poursat and Vandenameele 1980, 206–209; Olivier and Godart 1996, 186–190). Judging from the material used in the Atelier de Sceaux (mainly local soft stone) and the rarity of inscriptions, the sealstones produced here appear to have been inferior to the four-sided inscribed prisms and *Petschafte* (stalk signets) that were used to impress the sealings in Quartier Mu (Godart and Olivier 1978; Poursat 2000a. See Krzyszkowska 2005, 12–15 for seal shapes). One impression on a nodule from Mu was made by a metal ring with Cretan Hieroglyphic inscription (Godart and Olivier 1978, 82), drawing attention to an archaeologically not very visible class of elite sealing device. Metal signet rings existed in the MM I–II period (Krzyszkowska 2005, 83), but are seldom preserved and the same applies to the gold prismatic sealstone with Cretan Hieroglyphic inscriptions (see Olivier and Godart 1996, 284 for an example from Malia).

With the possible exception of the egyptianizing appliqué pottery, there is also no evidence to suggest that the pottery (tableware and other) consumed in Quartier Mu was actually produced in the Atelier de Potier (Poursat 1997, 303). In fact, it has been argued that the pottery from Quartier Mu displays different modes of production, which should probably be associated with different workshops (Knappett 1997, 309, 1999, 630–631). There is no evidence to suggest that the trichrome pottery (*inter alia* the style *écossais*) was produced in the Quartier Mu workshop and although the Quartier Mu elite had access to it, so did other people. Houses Delta beta and Zeta gamma were probably moderate houses but

it is interesting to note that they were consuming similar pottery as Quartier Mu (style écossais, straight-sided cups with festoons; Deshayes and Dessenne 1959). The MM II building below Quartier Nu also yielded fragments of trichrome pottery (Schoep and Knappett 2003). In fact, it seems that in the category of local pottery similar types and similar decorations are attested in most locations. Even the egyptianizing pottery was not limited to consumption in Quartier Mu since a vase with scalloped rim and an appliqué panther was found in the palace (Chapouthier and Demargne 1962). Interaction with regions beyond Malia is shown by the importation of Mirabello and Mesara storage vases and their contents (Poursat and Knappett 2005; Schoep and Knappett 2003) and was not exclusive to Quartier Mu either (Schoep and Knappett 2003).

An assessment of the finished goods produced in the Mu workshops and the goods consumed in Buildings A and B leads to some important conclusions concerning the involvement of this elite group. The attached workshops were in the first place aimed at the production of utilitarian objects, stone vases and sealstones of average quality rather than the more obvious elite culture objects consumed in the main buildings. With the possible exception of the appliqué vases, the fine labor-intensive and highly standardized tableware consumed in Mu was acquired from a local workshop(s). There were presumably several local workshops (see discussion in Poursat and Knappett 2005, 140–152) that were organized according to different modes of production (centralized and administered) supplying the whole settlement. Poursat and Knappett (2005, 152) characterized the tableware from Quartier Mu as being the result of “semi-administered mode” of production because the difference between centralized and administered is one of labor input (decoration) rather than of technological difference in production. There is no reason to assume that the local Maliote workshops outside Quartier Mu were controlled by the Quartier Mu elite, since the same fine tableware was also consumed in other contexts at Malia. The involvement of the Quartier Mu elite in the production of the sealstones of higher quality (hard stones and inscribed) and of metal objects (Mu dagger, Chrysolakkos bee pendant, swords from the palace) remains unclear, as there is no compelling evidence to suggest that these were produced in the Mu workshops. It is obvious that the Mu elite was not the only consumer of these items in Malia and there is little reason to assume direct control on their part. That leaves unanswered the question of whether the production of elite culture items was administered, partly administered or independent. How did the system work? Was it based on supply and demand? Were pieces commissioned? What mechanisms lie behind the distribution or restriction of specific items?

Assessing the Level of Elite Material Culture of Quartier Mu in the Context of the Settlement: Sub-elite versus Inner Elite Culture

Quartier Mu may well be an elite context but to gauge the social implications of its material culture, it must be assessed within the wider context of its surrounding settlement and the region. While it is easy to assume that the elite of Quartier Mu enjoyed high status, it is harder to determine their relative position in the social hierarchy. In addition to the large elite complexes (Quartier Mu, Crypte Hypostyle, Magasins Dessenne), there are also moderately large (Delta beta) and smaller houses (Mu workshops, Zeta gamma) but most were reoccupied, resulting in a considerable loss of contextual data and a not entirely representative picture. Comparison of inter-site differences should, in theory at least, allow us to gauge differences in scale and to distinguish between the inner and the sub-elite.

We may assume that extensive settlements, such as Poros-Katsambas, Malia and

Knossos, were characterized by the existence of several competing elite groups which did not all hold the same degree of social power. It is likely that a certain hierarchy existed and that aspiring elites (or “sub-elite”) were copying the material culture of the inner elite (after terms coined by Baines and Yoffee 2000, 16). A possible way to distinguish between real and aspiring elites is by introducing hypothetical levels in elite culture production and consumption:

- Monumental architecture with innovations *versus* traditional architecture
- Active writing (tablets) *versus* passive use of writing (sealstones)
- Metal vases *versus* imitations of metal vases
- Imported objects/materials *versus* local objects/materials
- Production of value-added objects (*e.g.* “egyptianizing” pottery, red shiny serpentine stone vases).

It must be noted immediately that some of the hypothetical highest levels of elite culture, such as imports from Egypt or the Near East and metal tableware, are underrepresented in Quartier Mu. Metal tableware is rare and limited to one bronze bowl (IV5), several hinges, rivets, *etc.* (IV 4 and V 5), and three cauldrons, which were hidden beneath the floor of VI 1 (Atelier C) (Poursat 1992, 37). A tantalizing hint of what metal tableware may have looked like is provided by the silver kantharos from a MM I burial at Gournia: Tomb I (Davis 1979) and bronze bowls from tombs VI and VII at Mochlos (respectively of EM II–EM III and EM III–MM I date). Kamares pottery, although usually closely associated with elite consumption and elite culture (*e.g.* Cherry 1986; Day and Wilson 1998), may in fact just have been what it was initially meant to be: an imitation in a cheap material of metal tableware. The real elite tableware may have been in metal (as represented in the Tòd Treasure or Aigina Treasure). The large quantities of Kamares Ware from the palaces of Knossos and Phaistos may in itself be informative in this regard: it was high-quality tableware aimed at entertaining large crowds of people rather than a small select elite group. Van de Moortel (Van de Moortel 2002) has suggested that the fact that Kamares was relatively widespread seems to suggest that it was not a product of the wealthiest elites and that it may have been mass-produced by independent specialists. I would like to suggest here that Kamares Ware was in fact a product of the Cretan sub-elite rather than the inner elite. The same may hold true of other high-quality fine tablewares produced in other regions: the Maliote polychrome and trichrome styles (Poursat and Knappett 2005), the East Cretan Floral Alternating Style (Floyd 1997) and Spatter Ware at Petras (Haggis 2006).

The absence of eastern imports at Quartier Mu (Poursat 2000b, 29) must also be placed in context. Eastern imports are rare in MM II contexts on Crete in general, which may question the role Crete played in the directionality of these contacts.¹ However, metals and semi-precious stones were clearly making their way to Crete and the eastern influence on Cretan iconography also points towards contacts. The Mu Sphinx, the Chrysolakkos bees, the egyptianizing appliqué vases and the sword with the acrobat betray exposure to Egyptian iconography (Poursat 1973–4; Immerwahr 1985; Poursat 2000b) and the same way well be the case for the panther mace head from the palace. Such egyptianizing iconography not restricted to Quartier Mu and the Malia palace. Bridge-spouted jars with a pregnant female were also found at Poros and Phaistos (Carinci 2000, 34–25), a sealstone depicting a sphinx was found at Archanes (Krzyszowska 2005, 91, no. 146) and Taweret formed the subject of a gold signet ring at Phaistos (Weingarten 2000; Krzyszowska 2005, 106, nos. 181–183). The influence of Egyptian iconography must be seen within the wider framework of a number of borrowed technologies involving script, architectural innovations

(ashlar masonry, sunken basins, reception rooms), faience technology, *etc.* Manipulation of long-distance contacts with the East and exotic knowledge seems to have been a deliberate strategy in EM III–MM II for the expression of an elite ideology. Rather than arising from economic necessity, the importation of raw materials, finished goods and new technologies, beliefs and practices from Egypt and/or the Levant was fuelled by a constantly evolving elite ideology (Schoep 2006).

The large number of stone vases in Quartier Mu must be placed in a wider context. Large quantities were also found in Quartier Gamma (Demargne and Gallet de Santerre 1953), the cemetery and the Magasins Dessenne (Van Effenterre 1980). In Quartier Mu, concentrations of stone vases were found in Building B (IV4 and V6), where they seem to have been stored and in Building A where they had fallen from the upper floor into III 11 and III 8 (see Poursat and Knappett 2005, 262–265). More work is needed to clarify the typological distribution of the different types but judging by their distribution they may be an attribute of the sub-elite rather than the inner-elite in Middle Minoan II. It is worth emphasizing that in the case of Quartier Mu, a technique involving the heating of serpentinite, which causes the vases to take on a shiny red color, may have been experimented with. This technique is unattested anywhere else (Detournay, Poursat and Vandenabeele 1980, 65, fig. 1).

Administration including active writing (as opposed to impressing a sealstone) was taking place in Quartier Mu but also in the complex discovered by the survey at Koutsouras (Müller and Olivier 1991). Inscribed sealstones are also relatively rare and, apart from Quartier Mu (see Detournay, Poursat and Vandenabeele 1980), have been found in Quartier Epsilon and Gamma, at Chrysolakkos, and as surface finds (Olivier and Godart 1996, 41–45). As active writing (*i.e.*, administration) appears to have been restricted in distribution, it is tempting to associate it with inner-elite culture. However, the fact that the craftsmen producing the inscribed high-quality sealstones and the Chamaizi juglets appear to have been literate could again suggest that the technology of writing was available to a number of people. The existence of inscribed metal rings and inscribed seals of different qualities (soft local and hard exotic stones) suggests the existence of different levels in the availability of script.

A last aspect that needs to be considered is the highly innovative architecture of Building A in Quartier Mu (Schoep 2004), which incorporates a number of new architectural techniques such as ashlar masonry and architectural modules such as the Minoan Hall and the lustral basin for which at present no evidence exists in the Malia palace. The magazines with plaster platforms also seem to be a new architectural feature of this period (Van Effenterre 1980; Poursat 1992), but these are more widely represented in several other high-profile complexes in the settlement (Crypte Hypostyle, Magasins Dessenne). Architecturally speaking, façades that consist of roughly worked limestone blocks on a slightly projecting plinth are attested in Delta (beta) and Zeta (gamma). With the exception of the Crypte Hypostyle and perhaps the partly excavated Magasins Dessenne, none of the excavated architectural complexes display the architectural innovations that are attested in Quartier Mu.

This investment in the architectural elaboration of Building A of Quartier Mu suggests the intentional creation of a ceremonial venue away from the palace, aimed not at the community at large but at a select public (Schoep 2004). That Building A was used as an arena for staging ceremonies and practices is not only suggested by the combination of an innovative architectural spaces but also by the concentration of fine tableware in this sector of Building A (Poursat and Knappett 2005, 199). The largest concentration of cups was

found in I 13, the polythyron (15 carinated cups, one hemispherical cup, 55 straight-sided cups and goblets, two ladles and pouring vessels). This seems to confirm that this space was used for ceremonies involving a limited number of people, perhaps about 70 if the number of cups is anything to go by. The room with benches III 4 yielded 49 cups and goblets and is clearly connected with the food preparation activities in nearby III 7. Also in I 3 evidence for the consumption of food and drinks was found, whereas food preparation took place in I 11, which communicated directly with I 12, the “sanctuary” (Poursat and Knappett 2005, 200).

To conclude, it may be noted that none of the other residences in Malia reveal quite the same range of activities as Quartier Mu. However, one hesitates to conclude that the elite of Quartier Mu represents the only member of an inner elite because of the incomplete excavated sample from Malia and the loss of data caused by later reoccupation in other possible elite residences. One of the most important inferences to be made is that at least part of the material culture (high-quality sealstones, fine tableware) consumed in Quartier Mu was produced and consumed in other locations in the settlement. The same also applies to the high-quality goods such as the bronze dagger with gold handle, which seems to form part of a group of egyptianizing objects. There is no evidence pointing towards any control by the Quartier Mu elite of the production of this type of high-value and symbolic product that can without a doubt be ascribed to inner-elite culture. In fact apart from the egyptianizing appliqué pottery, there is no evidence that what we would call elite culture was actually produced in the Mu workshops, which seem in the first place to have aimed at the production of utilitarian rather than symbolic goods. Even in this case, it is not entirely certain that these terracotta appliqué vases were not imitations of metal egyptianizing tableware. It is clear then that the importance of Quartier Mu did not lie so much in the extraordinary character of the goods it produced and consumed. High-quality, unique and value-laden objects were relatively rare although the accumulation of goods points towards a great degree of wealth. In addition, practices that have left few or no traces such as the ceremonies that went on inside Building A with its polythyron, lustral basin and sanctuary must have played an important role in setting the Quartier Mu elite apart from other elite groups in Malia (see also Schoep 2004).

This analysis has made an attempt towards defining elite culture and its levels. I have suggested that elite culture can be broken down into an inner elite culture and a sub-elite culture. The wide distribution of fine tableware, stone vases and uninscribed sealstones in Malia would suggest that these should be considered characteristic of sub-elite culture rather than inner elite culture. Real elite culture may in Malia be defined as written administration, valuable and highly symbolic metal objects that were worn on the body such as daggers, pendants and signet rings, metal tableware, high quality inscribed sealstones and metal sealing devices and innovative architectural spaces and the exclusive practices that can be associated with them.

Assessing Elite Culture Elsewhere on Crete

Quartier Mu gives us an idea of what elite and sub-elite culture looked like in the MM II period at Malia. However, when moving to other regions, we have to take into account the likelihood that material culture and its deployment may have been very different. There is not only the issue of the size and scale of the socio-political units but also of the differential availability of resources and access to interregional networks, which are factors that determine the material forms of elite culture. One serious problem is our restricted and

partial knowledge of what is going on at other settlements, a result of piecemeal excavations. Good examples of this are Knossos and Poros-Katsambas. A MM IIA rectangular building beneath the South-West House at Knossos yielded evidence for administration and craft activities as suggested by pieces of unworked steatite, an unfinished sealstone and the unusual frequency of sawn cattle, sheep and goat horn-cores (Macdonald and Knappett 2007, 142). This structure was destroyed by fire and a more monumental building of cut stones was constructed in MM IIB (French 1992–93, 68). Important as it is, the social significance of this context is not easily assessed. Considering the size of Knossos (and Poros) and on analogy with Malia it may be assumed that multiple elite groups existed. The settlement of Poros expanded considerably in MM IB and large buildings with painted plaster, Kamares pottery of excellent quality, imported pottery from the Mesara, numerous sealstones, large rock-cut tombs and plenty of evidence for cult (sheep-bell figurines) was found (Dimopoulou-Rethemniotaki 2004). The pattern revealed at Monastiraki is also interesting. Besides the building on the top of the Charakas hill, sizeable houses have been excavated to the east. One of these is particularly interesting because of the large number of sealings (659) that have been found. The house consists of more than 80 rooms and besides storage rooms it also seems to have been used for workshop activities (Kanta and Tzighounaki 2000). Another house to the south of the building on the top of the Charakas hill yielded the well-known house-model and 137 sealings.

On the basis of a cursory overview of elite material culture in different geographical regions of Crete some interesting deductions can nevertheless be made. The most important one is that the scale and complexity of a center (size of main settlement, number of large complexes, social hierarchy, competition, *etc.*) and its access to interregional networks have an influence on the originality and complexity of elite culture. In the smaller centers there seems to be a tendency to emulate aspects of elite culture of larger polities either through import or local production. This is the case for the elite at Myrtos Pyrgos and Monastiraki, who are looking towards Malia and Phaistos respectively. There is no reason to assume the existence of multiple elite groups at Myrtos but that at least one existed is suggested by the remains of the building(s?) on top of the hill and the rectangular house tomb (Cadogan 1978). Work by Knappett has greatly clarified elite culture at Myrtos-Pyrgos and the local production and emulation of Maliote fine tableware (Knappett 1999). Outside knowledge seems to have been restricted to that gained via interregional networks, especially connecting this site with the Malia region. Also the practice of using Cretan Hieroglyphic sealstones to impress handles and weights seems to imitate Maliote practice and two four-sided prismatic sealstones were found (Knappett 1999, 633). At Monastiraki, polychrome pottery imitates the pottery consumed at Phaistos, although it is clearly of a lesser quality (Kanta 1999). The use of direct object sealings also seems to be inspired by the Phaistos system, although there are differences in the way the system was put to use (Kanta and Tzighounaki 2000; Militello 2000).

The situation in Lasithi, an independent polity between Malia on the north coast and Myrtos Pyrgos on the south coast (Nowicki 1995), is also enlightening. By MM I the plain was densely occupied with several large settlements (Plati Kefala, Tzermiado Kastellos, Kaminaki Afendi Christos and Avrakontas Kastellos) on defensible hills (Nowicki 1995). The dynamic among these different sites is not clear but Nowicki (1995, 39) has suggested that these sites may have controlled different parts of the Lasithi plain and the mountains beyond. The fact that the Trapeza cave was in use from the Final Neolithic till the MM II period and that the Psychro cave seems to take off when the Trapeza cave declines (Poursat and Knappett 2005) may suggest a shift in power on the plain. Egyptianizing objects were

found in the Trapeza Cave and recently also in the Ayios Charalambos Cave. None of these seem, however, to have been produced locally. The scarab in white paste from Ayios Charalambos points towards the Mesara (Pini 1990), as does the pendant in the shape of a monkey in hippopotamus ivory (other examples from Mesara tombs; Betancourt 2005a, 451). Daggers of Mesara type, a sealstone in the shape of a monkey and an ivory human head (Pendlebury and Money-Coutts 1935–36) also point towards the Mesara as the place of manufacture. This suggests that elites in Lasithi were relying on the import of finished products from the Mesara. The picture painted by the pottery is different and the pottery from Kastellos-Tzermiadon shows resemblances with Malia and pottery types common at Malia are also found here (Poursat and Knappett 2005, 195, note 1). It is not clear, however, whether this pottery was locally produced or imported. The Ayios Charalambos Cave has yielded local pottery, but also imports from Mirabello, Malia, and Knossos (Langford Versteegen 2007).

Conclusions

Early approaches to Middle Minoan political economy were top-down, focusing on the First Palaces as the principal political, economic and religious power base and sub-dividing the Cretan landscape into a handful of large territorial states that were considered to be peer polities. However, it is becoming more and more clear that Crete did not consist of a handful of large peer polities but of an unknown number of larger and smaller polities. Power and agency, expressed in terms of control over the production, ownership and deployment of material, social and symbolic resources, do not appear to have been concentrated in the Palaces, but were distributed at multiple places in the settlements and the landscape and operated at different levels. These power configurations may be usefully modeled through detailed study of the production, diffusion, emulation and consumption of what might be termed elite or “high culture.” Baines and Yoffee make a distinction between inner or core elites and sub-elites. A similar distinction between elite high culture and sub-elite lower culture must be made when studying elite culture and social power on Crete. It may be assumed that high culture was restricted to the inner elites whereas the sub-elite was merely imitating high culture at a lower level (*e.g.*, cheaper non-exotic material). In order to define the upper end of the echelon or elite “high” culture, production and consumption in Quartier Mu, an elite building complex par excellence, was assessed. This yielded interesting insights in the ways the Mu elite was deploying material culture to maintain and legitimize its elite ideology. Although elite ideology is propagated through elite culture, it seems that the main production of the attached Mu workshops was aimed at sealstones of average quality, stone vases and utilitarian metal objects. In addition, apart from the egyptianizing reliefs in Malia, there is no evidence that any of the high-quality pottery, sealstones and metal objects (dagger, bowls) were produced in the Mu workshops. On the contrary, they seem to have been purchased from other local and non-local and presumably highly specialized workshops for which there is no reason to assume that they were controlled by the Mu elite. This is perhaps a surprising conclusion, which requires a discussion of the relationship between workshops producing items of elite culture and the elite groups but which falls beyond the scope of the present article. The wide distribution of seals in the style of the Atelier de Sceaux (Poursat and Papatsaroucha 2000), of stone vases, of high quality tableware could suggest that these were objects that are better associated with sub-elites rather than with inner elite high culture.

The social implications of a study of elite culture can only be understood when the latter

placed in a wider context, whether locally (settlement), regionally (wider region) or interregionally. This also applies for Quartier Mu, which although exceptional in the current archaeological record, may only have been one of several elite groups in Malia. A study of the goods consumed and produced in Quartier Mu suggests that the latter does not distinguish itself from other groups in town by the extraordinary character and quality of the goods consumed (which are limited to a restricted number of objects) as much as by the quantities in which goods were consumed. In addition, it would seem that the practices that took place in Building A and left little archaeological traces apart from the concentrations of fine tableware must have been an important strategy in the underpinning of the social power held by the Quartier Mu group.

The same methodology may be applied to other settlements, but unfortunately this is hampered severely by the fact that there are few extensive excavations of settlements. Promising sites are Poros-Katsambas, Monastiraki and perhaps also Petras. However, elite culture will take on different forms in different places as it is influenced by factors such as access to foreign resources and networks, which in itself is closely connected with the scale and complexity of the polities. In addition, what constitutes elite and sub-elite culture may differ even in places of similar complexity and access to resources. However, since metal objects, monumental architecture, innovative techniques and exotic goods are the most common ways of underpinning elite strategies, it may be assumed that elite high culture at other centers such as Knossos and perhaps at Phaistos took these forms. Styles and themes may, however, have been different (as was the case for the glyptic traditions) although one may expect fascination with the East to have played a role, especially in north-central Crete with its affluent harbor at Poros.

Note

This observation is based on the catalogue compiled by Lambrou-Phillipson (1990). It is clear from the contexts that most Orientalia come from earlier burial contexts although obviously imported raw materials are making their way to Crete: gold, copper, tin, semi-precious stones, etc.

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FROM THE KINSHIP ECONOMY TO THE PALATIAL ECONOMY: THE ARGOLID IN THE SECOND MILLENNIUM BC

Sofia Voutsaki

Introduction

The debate about the extent of centralized control over the palatial economy in the Minoan and Mycenaean world has been going on for some time now (See Killen 1985; Chadwick 1987; Halstead 1992; Galaty and Parkinson 1999, 2007; Burns 1999; papers in Voutsaki and Killen 2001a; Voutsaki and Killen 2001b, Voutsaki 2001a; Sjöberg 2001). While many aspects have been clarified in these last decades, the discussion suffers from two weaknesses. First, most archaeological studies base their inferences on only one kind of evidence, either mortuary or settlement evidence; or they examine only one domain of social and economic life, *e.g.* either production or trade or consumption; or they tend to concentrate on only one category of artifacts, *e.g.* pottery (Galaty 1999; Knappett 2001; Whitelaw 2001) or lithics (Parkinson 2007). It is therefore essential to carry out a study of both mortuary and settlement evidence, to pay attention to production, distribution and consumption, and to study different classes of artefacts. The second, and in my mind most important problem, is that the discussion is static, as it concentrates almost exclusively on the palatial period (with the exception of the studies by Burns [1999] and Sjöberg [2001]). While this is perfectly understandable for studies focusing on the Linear B evidence, the archaeological evidence offers a much longer time depth and thereby gives us the opportunity to study not only the final outcome of centralization, *i.e.* palatial economy in LH IIIB, but also the *process* of centralization itself. In order to do so, we need to reconstruct the social strategies that transformed relations of power and channeled resources towards emerging centres *over a longer period*. So far we have failed to do so, at least in the Greek mainland. This is largely because most attempts at explaining the rise of the Mycenaean states and the formation of the palatial system in the mainland start at the Shaft Grave era (MH III–LH I), *i.e.* the period when the pace of change is quickening and the political landscape of the Greek mainland is already being transformed (Dabney and Wright 1990; Wright 1995; Voutsaki 1995; the studies by Burns [1999] and Sjöberg [2001] begin at the LH I period). In this paper I would like to argue that we can only reconstruct the political economy in the palatial era, if we understand the social transformation that swept the southern mainland in the transition to the Late Bronze Age, *and* if we extend our study to explore the roots of these developments in the earlier part of the Middle Bronze Age. My main argument is that the structures guiding social life in the earlier part of the MBA constrained both strategies of aggrandizement and the attempts at resistance and subversion. To put it differently: I will argue that we can understand political economy in LH IIIB better *if* we understand the situation in MH I–II.

My argument will consist of three parts:

1. I will first discuss social structure in the MH I–II period on the basis of both funerary and settlement data.
2. Second, I will briefly outline processes of change from the MH I to the LH IIIB period by examining patterns in the consumption of coveted and exotic goods in tombs. The main aim is to understand the mechanisms that led to the emergence of the Mycenaean principalities in LH I–II and the appearance of the palaces in LH IIIA. At the same time, I hope, this discussion will also reveal how strategies of differentiation are constrained and shaped by the traditional structures prevailing in the earlier part of the MH period.
3. Finally, I will examine the consumption and production of valuable items in the three main Argive centers, *i.e.* Mycenae, Tiryns and Dendra, during the peak of the palatial system in LH IIIB. This comparison will allow me to comment on the political organization of Mycenaean Argolid and the relations between the three centers, hence on the nature and extent of palatial control.

The Argolid in MH I–II

It is widely known that the southern Greek mainland suffered a series of destructions followed by depopulation towards the end of the EH period and the transition to the MH. Indeed, in sheer contrast to the densely inhabited EH II landscape (Pullen 1985; Cosmopoulos 1998), fewer sites are inhabited in MH I–II (see Table 5.1 and Fig. 5.1).² However, only two large and well-documented sites, Lerna and Asine, allow a more detailed and systematic analysis.³ In an attempt to reconstruct social structure, the mortuary evidence will be examined along the main dimensions of personal identity: age, gender, kinship and status.⁴

Starting with age, despite the overall homogeneity of mortuary practices in MH I–II, differentiation between age categories can be observed (Nordquist 1979; Nordquist 1987, 109; Voutsaki 2004, 356–357; Milka n.d. a; n.d. b) – although it is manifested in slightly different ways in the two sites. In Lerna age differentiation is expressed in the placement of graves, *e.g.* only neonates are placed in houses still in use; in the tomb types used, *e.g.*, jar burials contain only subadults, cists are associated more often with adults, *etc.*; and perhaps in the offerings accompanying the dead, *e.g.* clay vases were never given to older people, most of the tools were deposited with adults, *etc.* (Milka n.d. a; Milka in Voutsaki *et al.* in press). In Asine the different age categories are more segregated than in Lerna, with adults more often being buried in the outskirts of the village. Just as in Lerna, jar burials are also used only for sub-adults, but differentiation in the offerings is not really marked (grave offerings anyway occur more rarely in Asine than in Lerna; see below) (Milka, n.d. b).

Site	Settlement evidence	Burial evidence
Lerna	Settlement	Large intramural cemetery
Asine	Settlement in Kastraki (mainly in Lower Town, perhaps on Acropolis)	• Intramural burials among houses in Lower Town and Acropolis • Tumulus from MH II onwards in East Cemetery
Argos	One large settlement, or two separate smaller settlements (Quartier Sud, Northern sector: Aspis / Deiras / Larissa?)?	• Intramural burials in Quartier Sud, on Aspis and Deiras • "Tumulus" B in use; a few other graves in "Tumuli" A and Γ in use • Existence of other extramural tombs not certain
Mycenae	Settlement remains both inside and outside citadel, but extent in MH I-II uncertain	• Possible that some burials date to this period – most are unfurnished, and therefore not datable • Possibly both intramural and extramural graves
Tiryns	Settlement remains in citadel and Lower Town, but extent in MH I-II uncertain	• Possible that some burials date to this period – most are unfurnished, and therefore not datable. • Not clear whether intramural or extramural
Midea	Possibly entire citadel area occupied; some walls and floors, one terrace wall	A few burials, but not well preserved
Berati	Settlement inhabited throughout MH, but extent of MH I-II occupation unclear	No burials seem to belong to MH I-II

Table 5.1. Sites in the Argolid occupied in Middle Helladic I–II. Lerna: Blackburn 1970; Zerner 1978. Asine: Frödin and Persson 1938; Nordquist 1987; Dietz 1980; Voutsaki et al. in press. Argos: Deshayes 1966; Touchais 1998; Protonotariou-Deilaki 1980; Voutsaki et al. 2009. Mycenae: Shelton in press. Tiryns: Müller 1930, 79, 95, 111, 117; Gercke and Hiesel 1971; French and French 1971; Grossmann and Schäfer 1971; Gercke and Hiesel 1975. Midea: Demakopoulou & Valakou in press. Berati: Lindblom n.d. This list of references is of course far from exhaustive.

Gender differentiation is less pronounced in MH I–II than in MH III–LH I (Voutsaki 2004, 356–357, 361). However, some differences can be observed: for instance, in Lerna women are usually buried contracted on their left side, while men are placed on their right side (Nordquist 1979, 17; Milka in Voutsaki *et al.* 2004, 37; Ruppenstein in press) – interestingly, this holds in Barbouna, but not in Kastraki and the East Cemetery (Milka n.d. b). Eleni Milka also observes some differentiation in the offerings (*contra* Voutsaki 2004, 356), although we are dealing with tendencies rather than with rigid patterns. Interestingly, gender and age are sometimes closely connected: for instance, in Lerna weapons are found with adult men, while only juvenile females receive beads (Milka n.d. a). Indeed gender roles may be redefined at different stages in people's lifecycles, and therefore age and gender are interdependent and fluid rather than separate categories (Sofaer Derevenski 2004).

Let us now examine a category favorite with archaeologists: status. Traditionally, two aspects of the evidence, grave elaboration and wealth, *i.e.* the quantity, diversity and quality of funerary offerings, are used as criteria of status differentiation in archaeology. But neither category is very meaningful in MH I–II Argolid. Attributing the differences between jar burials, pits and cists to status differences makes little sense, since we have seen that age plays an important role in the selection of the grave type (for reasons that will become obvious later, I do not discuss tumuli as yet). If we examine additional features (cover slabs, markers, floor), these occur more often in cists (Milka n.d. a) – but this is hardly surprising. Equally, the term "wealth" is rather inappropriate in the early MH context: most graves are unfurnished; if offerings are deposited with the dead, they consist of one vase, a stone tool,

a whorl, or a bone pin, and very rarely bronze rings, stone beads or a bronze weapon (Milka n.d. a). It is true that some differences can be observed, but, in MH I–II Argolid at least,⁵ these are minimal. Should these differences be interpreted as status differences? Equating funerary wealth with personal status held in or aspired to in life, a main tenet of the systemic mortuary analysis (Binford 1972), has been rightly criticized in the last 30 years (Hodder 1982). Therefore, in the absence of any corroborating evidence, this remains an assumption rather than a conclusion. Interestingly, if we correlate tomb type and “wealth,” no consistent correlation can be observed in the early period. We can therefore conclude that MH I–II burials are not characterized by salient status differences; it is therefore doubtful if the category status is very useful when examining burials from this period.

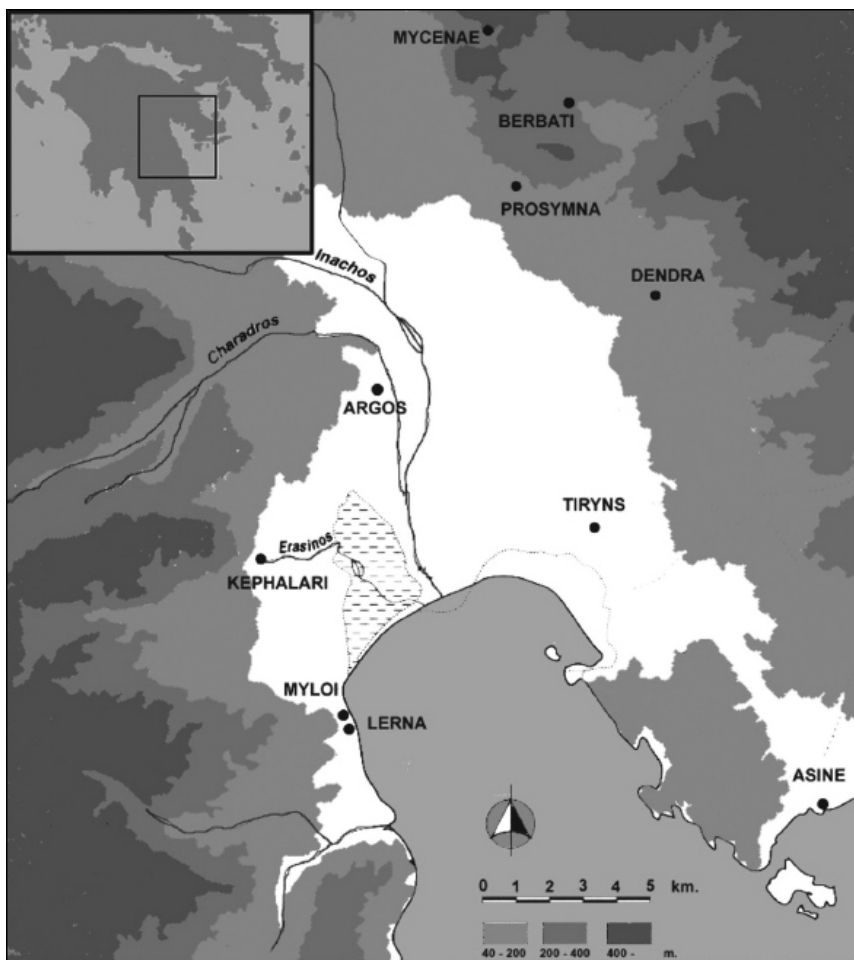


Figure 5.1. Middle Helladic sites in the Argolid.

While differences within communities are not really marked, differences *between* communities do exist: burials in Lerna receive a more diverse and richer assemblage than those in Asine (and, we may also infer, than those in Mycenae and Tiryns where some of

the unfurnished graves may belong to this early period); on the other hand, the tumulus seems to be introduced for the first time in Asine and Argos (see below).

Let us summarize the observations made so far:

- Age differentiation can be observed.
- Gender differentiation exists, but is less pronounced.
- There is no emphasis on wealth and status.
- There is more emphasis on horizontal than on vertical differentiation.
- There are differences between communities.

To conclude: despite the apparent homogeneity in mortuary practices in the MH I–II Argolid, subtle variation can be detected. But no strict and rigid patterns can be observed; if anything, mortuary patterning in the early MH period is characterized by “fuzziness” and fluidity rather than by clear differentiation.

However, the mortuary record need not faithfully reflect social relations, and we therefore need to examine the settlement evidence as well. The discussion here will concentrate on Asine (Voutsaki in press), as the analysis of the settlement evidence from Lerna is still in progress.

Houses in MH I–II Asine are rectangular, self-standing and fairly homogeneous in terms of layout and construction. The same can be said about their contents: although quantifying storage capacity is difficult, each house seems to have its own storage features (bothroi, bins, large jars) as well as its cooking facilities, such as hearths or ovens inside or outside the house. In addition, no concentrations of manufactured items, tools, or unfinished objects can be observed (Nordquist 1987, 90); in Asine in particular, no area in the settlement can be designated as a workshop, but most houses have some kind of evidence for work activities taking place inside or in the courtyard (Nordquist 1987, 90). Craft production seems to have been dispersed and there is little evidence for specialized workshops and for craft specialization in general; we seem to be dealing with what Nordquist calls “household industry.” Nordquist’s conclusions, based mostly on her discussion of pottery production in the Argolid (Nordquist 1995, 202; 1997, 537) are also confirmed by Spencer’s analysis (in press). Similar conclusions were reached about the production of stone tools (Runnels 1985). The situation in Lerna may have been somewhat different—at least, in terms of output, as there is evidence for the production of bone pins and for metalworking (Nordquist 1987, 39, 44). However, as no spatial analysis of the Lerna settlement can be undertaken at the moment, we cannot reach any conclusions about variation in economic activities between households.

	Burials	Settlement
Bone	3	31+
Ivory	-	2?
Faience	-	1
Boar’s tusks	-	13+
Stone vases	-	6
Imported pottery	-	Aeginetan, Cycladic, Minoan, etc.

Table 5.2. Imported or manufactured finds in Middle Helladic Asine.

To conclude, so far no evidence of differentiation between MH I–II households can be observed (Nordquist 1987, 90; Voutsaki in press). The marked homogeneity in the

settlement sphere confirms the absence of status differences we inferred from the burial evidence.

It is worth studying more closely the distribution of non-ceramic artefacts in the domestic sphere, as it reveals another interesting pattern (Table 5.2): during the MH period⁶ manufactured or imported items are much more often found in settlement deposits than in graves.

This evidence suggests that there were more goods circulating in early MH settlements than we tend to assume – although I do not want to imply that large amounts of wealth or exotica were available to the early MH communities! If we take into account the general absence of differentiation among MH I–II households, we can infer that locally manufactured or imported items were supposed to circulate among households rather than be accumulated by some individuals or families and deposited in houses or in tombs. We could therefore reconstruct a segmentary network of exchange between families and kin groups.

Interestingly, this pattern holds also for pottery imported from other regions in the Aegean (Table 5.2). Once more, differentiation in the quantity of ceramic imports between communities can be observed: Lerna has a higher number of imports than Asine, while as far as we can say at the moment smaller quantities are reported from other sites (Nordquist 1987, 66–67). No concentrations of imports in any one house have been observed in Asine (Nordquist 1987, 90). However, in Lerna there is a concentration of Minoan storage jars in the MH I complex consisting of House 98A and Rooms 44–45 (Zerner 1978, 42–45), but in other respects imports seem to be evenly distributed across the site (C. Zerner, personal communication – though it has to be kept in mind that a large proportion of the pottery found at Lerna has been discarded).

A recent analysis of pottery production and consumption in EH III to MH II Asine adds an interesting dimension to this discussion: Spencer (Spencer 2007, 150) has observed that the ceramic assemblage at Asine is characterized by diversity and the coexistence of different wares, some of which were local, some probably produced in the vicinity of the site and some imported from further afar: Aigina, the Cyclades, Crete and central Greece (as already pointed out by Nordquist 1987, 63). The fact that households in Asine clearly tried to acquire different pots from different regions led Spencer to infer an acquisitive ethos in MH Asine which she sees as an early manifestation of the competitive and display-oriented spirit of the Shaft Grave era. However, Spencer's argument can be reversed: it can be argued that people did not exchange in order to acquire pottery, but *acquired pottery in order to exchange*. Indeed the fact that imported pottery does not seem to concentrate in specific households (at least not before MH III: Nordquist 1987, 90) implies that what mattered was to maintain the network of social relations and exchanges with members of the same and different communities.

If this is accepted, then we can infer that material culture was *not* used in strategies of differentiation or personal aggrandizement. If we combine this to the emphasis on horizontal relations reconstructed on the basis of the mortuary analysis we can conclude that *the main organizational principle in the MH period was kin rather than status; as authority was embedded in kin relations, it did not require ostentatious gestures, impressive houses or rich graves for its legitimation*.

This conclusion can be strengthened if we examine variation between kin groups rather than concentrate on variation between individuals. Interestingly, intramural graves form distinct clusters that remain in use for a long period (Milka 2006). The age and sex composition of these clusters, *i.e.* the inclusion of men, women and children in each burial

group, supports the idea that these clusters represent kin groups (perhaps nuclear or extended families), rather than some kind of affiliation groups (Milka 2006). In addition, some of these clusters share some characteristics: *e.g.* in Lerna secondary treatment or multiple burials are relatively uncommon, but they are found more often in two grave clusters; in addition, some clusters in Lerna contain more offerings, or more imported items (Milka in Voutsaki *et al.* 2007, 67). This implies that people buried or burying in these two clusters share a certain mortuary behavior, and they do so *over a considerable length of time*.

Other aspects of the evidence confirm the importance of kinship and descent in MH times: markers are sometimes found on top of intramural graves; offerings are sometimes placed above the grave (Milka n.d. a). What is perhaps the strongest indication that the ties between the dead and the living were never totally severed, is the fact that specific areas inside the settlement are used interchangeably for houses and graves: in Lerna, burials are very often placed on top of abandoned and ruined houses; after some time, a new house is built on top of the abandoned house and graves, and in its turn the new house is abandoned and used as a burial plot (Milka in press). Interestingly this is less common in Asine.

To conclude: I would like to suggest on the basis of the mortuary patterning, the circulation of goods among domestic units and the clustering of graves that the main structuring principle in early MH social life was kinship. Craft production was dispersed and household-oriented, and exchange was operating on a segmentary basis despite the uneven participation of the Argive sites in Aegean networks.

I should emphasize that kin-based societies are neither egalitarian nor stable. Already during the early MH period, we can detect differences, changes, shifts and oscillations in both the mortuary and domestic record – but these changes do not constitute the kind of linear, irreversible change we normally (though perhaps wrongly) associate with the emergence of differentiation. For instance, the MH I complex around House 98A in Lerna may have had many Minoan storage jars, but it was not particularly rich in small finds (Banks 1967; C. Zerner, personal communication), and the tombs opened into its ruins contained nothing extraordinary.

One change, however, may indeed announce the deeper transformation which will take place in MH III–LH I: During or at the end of MH II, a burial mound is erected to the east of the settlement of Asine.⁷ It has been argued that extramural cemeteries in general, and the tumulus in particular are the burial places of the elite (Nordquist 2002; Nordquist and Ingvarsson-Sundström 2005), but Milka believes that the differentiation is less marked than hitherto argued (Milka in Voutsaki *et al.* 2007, 76–80; indeed our research on the Argos “tumuli” weakens their identification as elite cemeteries: the tombs are not particularly wealthy, and by far the majority of graves is in use in MH III: Sarri in Voutsaki *et al.* 2009). This interesting question is beyond the scope of this discussion, as the tumulus is used mostly during MH III–LH I – what matters for my argument, is that a tumulus emphasizes not only *difference from* the rest of the community, but also *unity between* the members of the group using the tumulus. Therefore, the moment differentiation is expressed in the mortuary sphere, kinship and descent are more strongly emphasized.

The mention of change brings us to the next section: the process of change from the MH to the LH period. It is time to see how the traditional structures – emphasis on kinship, absence of differentiation, and segmentary networks of exchange – are gradually undermined and eroded.

Processes of Change: From MH I to LH III B

In this section, the discussion will be based exclusively on the mortuary evidence, since settlement evidence is particularly scarce between MH III and LH III A. The emphasis will be on the consumption of valuable and exotic goods in tombs. I have elsewhere argued extensively that conspicuous consumption does not simply express or legitimate, but *creates* status asymmetries (Voutsaki 1995, 1997), and that asymmetric gift exchange is a subtle, but forceful strategy to *create* relations of indebtedness and dependence (Voutsaki 2001a). Therefore, centralization of resources may be achieved through the subtle manipulation of conspicuous consumption and gift exchange. Let us see how this approach helps us understand the Mycenaean case.

Starting with MH I–II, Figure 5.2 shows the distribution of “valuables” in the different sites of the Argive plain.⁸ We ought to keep in mind the conclusion reached above: that the amounts deposited in early MH tombs do not fully reflect the quantities circulating in the settlement. However, the settlement evidence (where it exists, *i.e.* only for Lerna and Asine) does confirm the pattern: in Lerna there are more non-ceramic finds, more evidence for manufacture (Banks 1967) and more imports than in Asine (as pointed out already by Nordquist 1987, 66–67). Very few non-ceramic finds are found in the sites further inland, or in the eastern part of the plain – though the problems of preservation or publication need to be kept in mind.

If we examine the situation in MH III–LH I (Fig. 5.3), we notice immediately a dramatic reversal in the distribution of funerary wealth. This is the period the Grave Circles at Mycenae come into use and reach their peak in terms of deposition of valuable, exotic goods. While there are shaft graves and tumuli in use in other cemeteries, no site can be compared to Mycenae in terms of elaboration of graves and wealth. The shaft graves in Asine, Lerna and Argos are smaller, of much simpler construction than the ones at Mycenae (they are better described as elaborate cists) and not particularly rich – but it should be noted that the ones in Lerna were emptied at a later date. The IQ tumulus in Asine is in use in this period, though the only tomb dating with certainty to LH I is only moderately rich (1971–3, containing 16 vases and a bronze dagger, Dietz 1980, 34 ff.). Most of the burials in Argos reported to be found in “tumuli” (Protonotariou-Deilaki 1980) belong to this period, but the existence of tumuli is uncertain (Divari-Valakou 1998, 88; Papadimitriou in press; Voutsaki *et al.* 2009) and the burials are not particularly wealthy. The tumuli in Dendra, where also horse burials have been found (Deilaki 1990), may belong to the Mycenaean period (E. Pappi, personal communication). Chamber tombs are also introduced in LH I, but they are not particularly wealthy (Voutsaki 1993, 97).

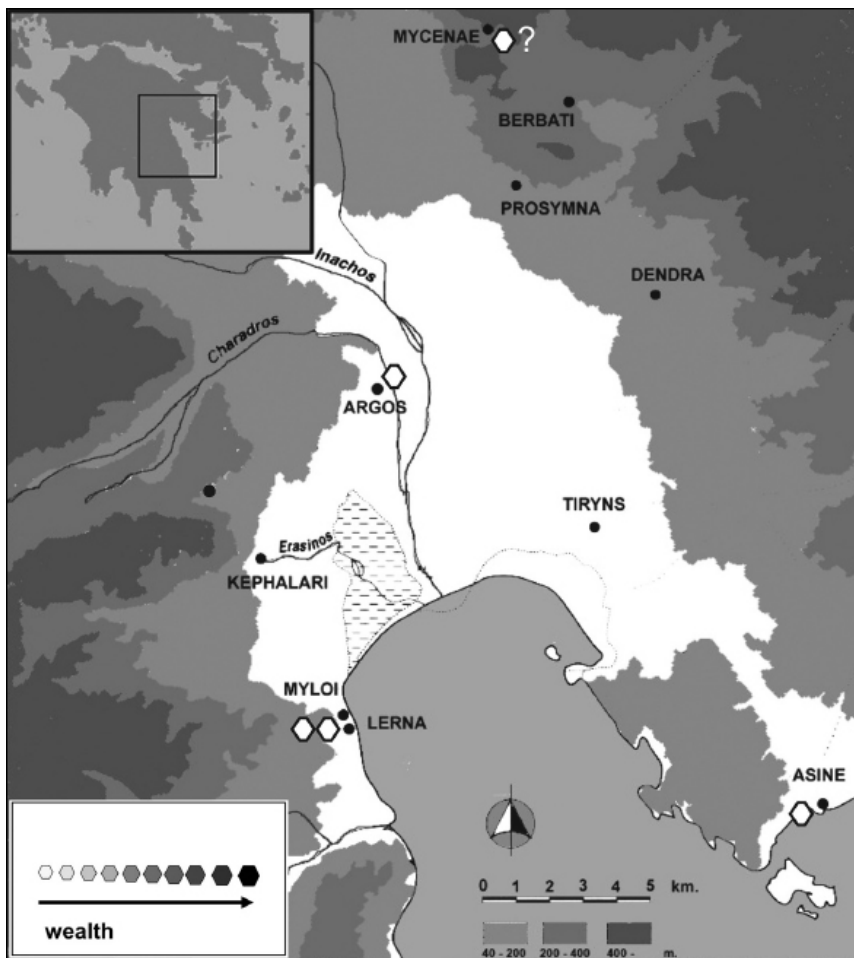


Figure 5.2. Distribution of wealth in Middle Helladic I-II.

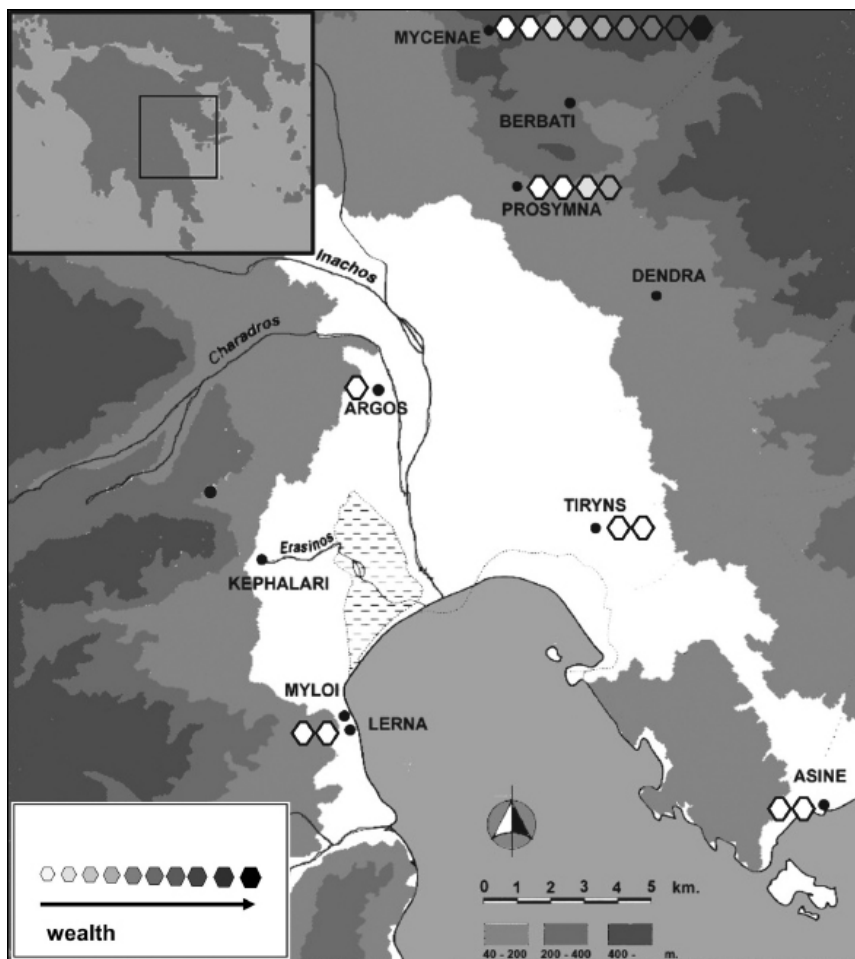


Figure 5.3. Distribution of wealth in Middle Helladic III to Late Helladic I.

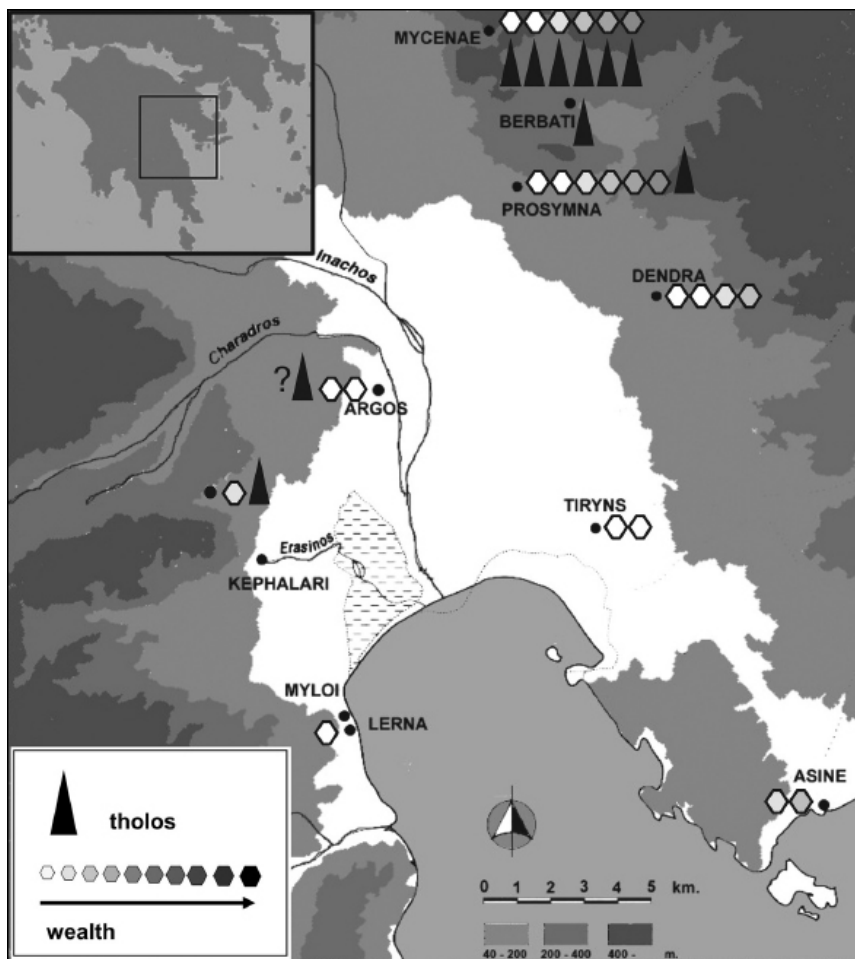


Figure 5.4. Distribution of wealth in Late Helladic II.

Therefore in this period Mycenae clearly eclipses Lerna, Asine and Argos. This implies that Mycenae, or rather a social group in Mycenae, has managed to penetrate, or perhaps initiate networks of gift exchange and diplomatic alliances with elites outside the mainland. I have argued elsewhere that the acquisition and ostentatious disposal of wealth with the dead became from MH III onwards the key weapon in social competition (Voutsaki 1995, 1997). Here, I want to emphasize two different points: First, that Mycenae, an inland site in the eastern side of the plain, rises in importance just as Lerna, Argos and Asine – sites situated at the coast, or in the western side of the plain – decline. Second, that just as status differences become important, increased emphasis on kinship and descent can be observed: the re-use of tombs and the secondary treatment of the dead gradually spread, and new types of tomb, especially designed for re-use (the shaft grave and the chamber tomb), are adopted.

In LH II the monumental tholos tomb is adopted in the Argolid, and immediately spreads to several sites (see Fig. 5.4), though Mycenae with possibly six tholoi in use retains its pre-eminent position. As most tholoi are robbed, our understanding of the

distribution of wealth across the plain is hampered. However, the evidence from the chamber tombs, which are often found intact, allows us to compare the different sites. If we look at Figure 5.4, we notice immediately that richer tombs are concentrated (more or less, in descending order) in Mycenae, Prosymna, Dendra and Asine. Some tombs of medium wealth are found in Argos, while no rich tombs are found in Lerna. I have argued elsewhere (Voutsaki 1995, 2001a) that by LH II conspicuous consumption at death becomes a main strategy of social aggrandizement and political competition between emerging elites. Here I want to stress that in contrast to the situation in the early MH period, richer tombs concentrate now in the eastern and inland part of the plain. The rise of Mycenae is accompanied by the rise of a whole group of other sites in the area (Voutsaki 2001b, 183). In this period, wealth is distributed more widely (than in LH I or LH III), in my mind because Mycenae needs the support of political allies in order to maintain and strengthen its still precarious position. It cannot be a coincidence that the richer tombs concentrate in the area around Mycenae, in the eastern part of the plain, while at this very moment most centres of the western part of the plain seem to suffer a serious decline.

In LH IIIA (Fig. 5.5) this pattern remains unchanged: wealth is concentrated in the eastern part of the plain. However, the relations between sites around Mycenae undergo significant changes: the abandonment of certain tholoi, notably those at Berbati and Prosymna, may denote the demotion of these sites and the expansion of the sphere of influence of Mycenae (similar arguments have been proposed for Messenia: Bennet 1995; Voutsaki 1998). This happens perhaps at a slightly later stage in Dendra, where the rich tholos was used only for a very short period in LH IIIA1. By LH IIIA2 tholoi are in use only in palatial sites, certainly in Mycenae and perhaps in Tiryns as well (where the tholoi have been emptied and cannot be dated), therefore the right to use a tholos becomes in this period a palatial, or rather royal prerequisite. The amounts of wealth deposited in chamber tombs decreases in general, though some rich chamber tombs are still found in Mycenae, Dendra and Prosymna, and perhaps in Asine and Argos. As a result, funerary wealth is once more being channeled towards Mycenae though some other centers still participate in the competitive arena of conspicuous consumption. The tendency we observed already in LH II now crystallizes into a clear pattern: wealth becomes concentrated into Mycenae, and to a lesser extent to other sites in the eastern part of the plain *surrounding* Mycenae.

The patterns we observed in LH IIIA become sharper in LH IIIB (Fig. 5.6) and the distance between palatial sites and the other sites in the plain increases. One, or perhaps two rich tholoi (the Atreus tholos is probably re-used in LH IIIB; the date of the Clytemnestra tholos is uncertain) are still in use in Mycenae; once more, the situation in Tiryns is unclear. Chamber tombs show a similar pattern: wealthy tombs are found only in Mycenae, while in all other sites there is a clear decrease in wealth. Therefore, the process of centralization of wealth we observed already in LH IIIA reaches its peak in LH IIIB. Sjöberg (2001, 191–196) reaches different conclusions about the distribution of wealth in this period; I will discuss this discrepancy in detail below.

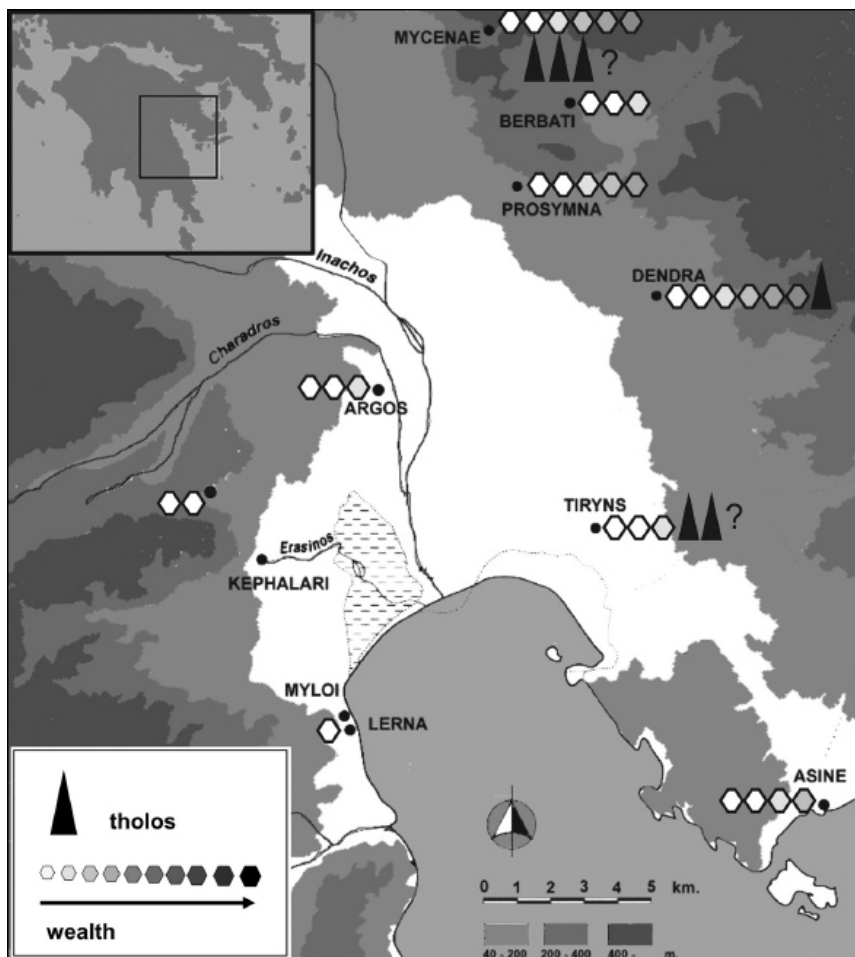


Figure 5.5. Distribution of wealth in Late Helladic IIIA.

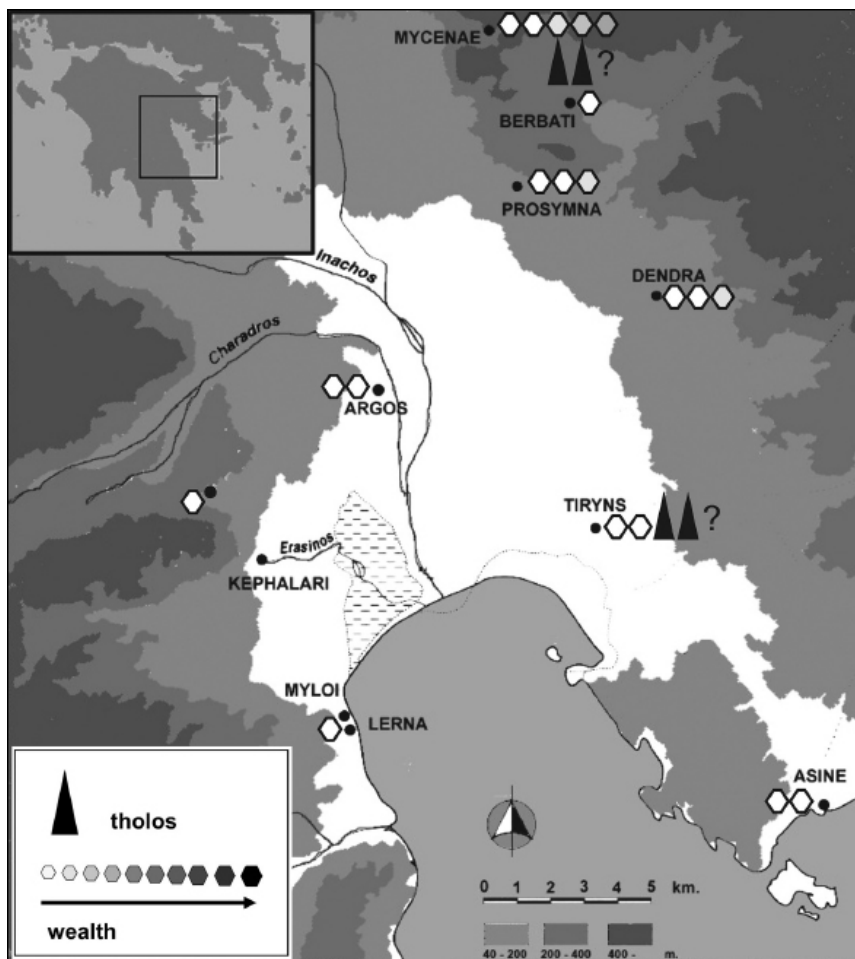


Figure 5.6. Distribution of wealth in Late Helladic IIIB.

We have seen that the examination of temporal and spatial patterns in the distribution of wealth has allowed us to reconstruct the *process of centralization* towards the palatial sites, especially Mycenae. However, what I want to emphasize here is that we are not seeing the rise and decline of individual sites, but of entire constellations of sites. The rise of Mycenae in MH III–LH I is followed by the gradual decline first of Lerna, then Asine and later Argos. Most importantly, Mycenae does not emerge alone; its increase is accompanied by the rise of Prosymna and Berbati where LH II tholoi are also found. The abandonment of the tholoi in these two sites marks their demotion in the site hierarchy and the expansion of the sphere of influence of Mycenae.

The relation between Mycenae, Tiryns and Dendra is a more complex matter. The mortuary evidence indicates that by LH IIIB wealth was channeled primarily towards Mycenae: in Dendra, the tholos remains in use for a very short time (LH IIIA1) and by LH IIIB a decrease in wealth can be observed across all chamber tombs in the cemetery (Voutsaki 1993, 98). This may be taken as evidence that the third centre of the Argolid was

an ally rather than a rival of Mycenae, and may even have entered its orbit of influence. In Tiryns, the chamber tomb cemetery is surprisingly poor throughout the period. However, in both cases the settlement evidence presents a different picture: the impressive citadel and palace at Tiryns share many similarities with Mycenae; Midea may be less awe-inspiring than the other two palatial citadels, but there is evidence for many of the activities and functions normally associated with a palatial centre, albeit perhaps in an attenuated form. It is becoming obvious that the political organization of the Mycenaean Argolid, and hence the degree of economic and political centralization in the area, cannot be discussed only on the basis of the funerary data. It is time to bring the settlement data into the discussion.

The Palatial Economy in LH IIIB

The relation between the three citadels in the Argive plain has been discussed mostly on the basis of the architectural evidence. All three sites have imposing fortifications, but those at Mycenae and Tiryns stand out in the entire mainland because of their true Cyclopean masonry, the existence of galleries and a hierarchy of gates. The similarities between the palace complexes in Mycenae and Tiryns are equally striking. The two sites undergo very similar and parallel architectural developments during LH IIIA–LH III B which seems to imply that they were allies rather than bitter rivals. The case of Dendra is rather different: the citadel is built later (in LH IIIB, notably at a time when wealth in the chamber tombs declines and the tholos is out of use), and the architectural remains are less impressive. Some caution is of course necessary: the site is poorly preserved and eroded, and the ongoing excavations reveal every year more evidence for palatial activities and functions.⁹

I will here approach the question from a different angle, namely by examining the production, distribution and consumption of valuable and exotic objects. I will first examine the evidence for the evidence for the manufacture of prestige items, and then turn to consumption in the domestic sphere. The problem of internal exchange and distribution will be discussed at the end.

Production of Valuables

The material, political and ideological significance of craft production has been emphasized in the recent archaeological literature (Costin and Wright 1998; Schortman and Urban 2004). In particular, assessing control over the production of prestige items, the means of social reproduction *par excellence*, allows us to reconstruct relations of power, but also strategies of resistance. The question is: Did palatial centers, or Mycenae for that matter, control or even monopolize the production of valuables?

Site	Location	Date	?	Description
Mycenae	House of Artisans	LH IIIA2?		Working of gold, ivory, stone, jewelry, glass, bronze
	Citadel House Area	LH IIIB1-2	?	Partially worked ivory, bone, antler, boar's tusks, jewelry, lead
	House of Sphinxes	LH IIIB1		Secondary working of ivory, wood
	House of Shields	LH IIIB1		Secondary working of ivory, wood, stone, faience
Tiryns	Unterburg: Rooms 210, 214-215	LH IIIA-LH IIIB1		Working or recycling of bronze, lead
	Unterburg: Bau I, Room 10	LH IIIB2		Metal, pottery
	U: Bau VI: Room 121	LHIII B2		Ivory (?), bone
	U: Bau VI, Rooms 191-192	LH IIIB2		Lead, bronze, iron
	U: Bau XI	LH IIIB2	?	Gold foil (?), bronze
	U: Area LXI 43-LXII 44	LH IIIB2		Bronze, lead
	U: N of Bau III, Area LXI 35-LXII 36	LH IIIB2		Lead
	Room 10a	LH IIIB2	?	Oven - function?
Midea	West Gate, Rooms II-V	LH IIIB2		Jewelry, semi-precious stone working
	West Gate, Rooms VIa/b	LH IIIB2		Jewelry, glass?
	N to West Gate, Room XI	LH IIIB2		Jewelry, semi-precious stone working

? = problematic identification

*Table 5.3. Workshops in palatial sites. Mycenae: House of the Artisans: Mylonas 1967, 93-94; House of Shields: Tournavitou 1995, 287 ff.; House of Sphinxes: Tournavitou 1995, 290 ff.; Citadel House: Krzyszkowska 1981; Krzyszkowska 1997, 146-147. Tiryns: Kilian 1978, 1983, 1988; Kilian, Podzuweit, and Weisshaar 1981; Kilian, Hiesel, and Weisshaar 1982; Krzyszkowska 2005; Rahmstorf 2003. Midea: annual reports in *Opuscula Atheniensia*. General discussions: Burns 1999; Sjöberg 2001.*

If we examine the distribution of workshops in the three palatial sites (Table 5.3), we notice immediately a concentration of workshops working with valuable materials (notably ivory and gold) in Mycenae. The evidence in Tiryns is restricted to metalworking (bronze and lead); there are some very uncertain indications of ivory working (Krzyszkowska 2005), but no working of glass and semi-precious stone is attested (Rahmstorf 2003, 67). In Midea there is plenty of evidence for the working of semi-precious stone, perhaps glass, and metals of modest value, *i.e.* bronze and lead. We therefore can see that the clearly hierarchical picture obtained from the mortuary evidence is confirmed by the evidence of manufacture and craft production. The distance between Mycenae and the two other palatial sites remains pronounced.

The evidence therefore (Table 5.4) seems to suggest that Mycenae exerted a very strict control, if not a monopoly over the manufacture of ivory and gold, the two most coveted materials examined here. In contrast, neither glass nor semi-precious stone was controlled by Mycenae. This is hardly surprising if one examines the much wider distribution of these materials in tombs and settlements (for the evidence from settlements, see below; for their distribution in tombs, see Voutsaki 2001a, 203). It is important to emphasize that control over one class of artifacts does not imply control over all classes of artifacts, and certainly not over the economy as a whole. But by controlling a few highly coveted materials and finished items, Mycenae effectively controlled the means by which people negotiated their position and competed for status.

Precious Material	Mycenae	Tiryns	Midea
Gold	+	-	-
Ivory	+	??	-
Precious stone	+	-	+
Glass	+	-	+
Metal	-	+	+

Table 5.4. Distribution of workshops working with precious materials.

Precious Material	Mycenae	Tiryns	Midea
Gold	55+	2	-
Ivory	ca. 20,250	44	7
Faience	35+	4	7
Precious stone	(not counted)	16+	59
Glass	520+	19+	16

Table 5.5. Consumption of valuables in the domestic sphere.

Consumption in the Domestic Sphere

Let us now examine the consumption of valuables in the domestic sphere.¹⁰ This may appear a futile and dangerous exercise: prestige items are not usually lost or thrown into rubbish deposits, therefore their distribution cannot be a reliable indication of what was circulating at the time. In addition, other factors such as recycling, preservation, erosion, but also the history of excavation and the quality of the available documentation¹¹ need to be taken into account. The absolute numbers therefore should be treated with caution – but the relative figures may strengthen or cast doubt on the conclusions reached so far. In fact, the data (Table 5.5) confirm the differences between Mycenae on the one hand, and Tiryns and Midea on the other.

However, the difference lies not only in the quantities of valuables found in the different sites: the Mycenae assemblage is very diverse, and includes several examples of high artistic quality and elaboration as well as many unique items (from the well-known Ivory Trio to more obscure, but equally unique examples such as, for instance, the agate pendant in the form of an eagle (?) found in Building 6 (Mylonas 1968, 106). The evidence suggests that Mycenae exerted control over both the production and consumption of prestige items, primarily the most coveted ones such as gold and ivory, and thereby controlled the means for social reproduction.

Internal Exchange and Distribution

We see therefore that in LH IIIB Mycenae there is a concentration of elaborate tombs, of workshops working with valuable and exotic raw materials, and of valuables in the mortuary and the domestic sphere. Both in the sphere of production and in the sphere of consumption we can detect a rigid distance not only between palatial elites and commoners, but also between the palatial elites themselves. I therefore propose that there is evidence for strict control by *one* palatial center, rather than by all palatial centers. However, not everyone agrees with this conclusion. Both Burns (Burns 1999) and Sjöberg (Sjöberg 2001) have argued for a wider spread of valuable goods and imports in LH III A–LH IIIB, which according to them indicates the inability of the centers (and of Mycenae in particular) to

restrict access to coveted goods. These differences in opinion should be attributed in the first place to different ways of collecting and evaluating the evidence. In my study (Voutsaki 1993), I have assigned a diversity score to all tombs (see above), but also noted fluctuations in the deposition of wealth inside each tomb. To give an example: if a grave had a high diversity score, and a peak of deposition in LH IIIA1, *i.e.* if it could convincingly be demonstrated that the valuable goods belonged to a burial deposited in LH IIIA1, this grave was not included in the discussion on the distribution of wealth in LH IIIA2–LH IIIB. Neither Burns nor Sjöberg took fluctuations of wealth *within* a tomb into account. In my mind, this weakens their arguments considerably, precisely because in the case of the Argolid the decline of mortuary wealth in LH IIIA2–LH IIIB is observed in many tombs.

However, the disagreement does not arise only from differences in method, but also from a different approach to the data. Burns states the dilemma: “It may well be that Mycenae was behind this circulation of imports, forging links with local elites and cajoling them into a subordinate position. The other possibility is that elites in various places were able to directly acquire imported items.” The question is: how do we choose between the two positions? The second possibility could only be correct, if there was no pattern in the acquisition and consumption of valuable or imported goods; if individuals could penetrate exchange networks only on the basis of their individual abilities and achievements. In my mind, the deeply hierarchical distribution of goods, and foremost the temporal and spatial patterns in their circulation leaves little doubt: I believe that the distribution of *a few* valuable goods in *selected* sites in the *eastern* part of the plain does not imply loss or absence of central control, but rather that creating and maintaining alliances was a key element in the process of centralization. Mycenae, the emerging power, did not want to prevent everyone from acquiring valuable items, but rather to control the process of distribution of insignia; more precisely, she wanted to promote her allies and to thereby ensure their loyalty, to exclude her rivals and thereby cunningly pave their downfall in the competitive arena. I therefore suggest that valuables were not acquired independently, but rather by cultivating links with the Mycenae elites (for a more extensive discussion on this point, see Voutsaki 2001a). But on the other hand Mycenae, even during the peak of her power, remained in fact dependent on her allies. I have suggested that Tiryns and Midea became the main allies of Mycenae, perhaps because of their previous history, but also because of their location along the eastern side of the plain, giving access to important maritime and land routes and fertile areas. In contrast, the important MH centers, Lerna and Argos, decline and contract during the Mycenaean period.

My main objection to Burns’ conclusions, however, concerns not only his specific reconstruction of the political landscape, but rather his “either-or” scenario: centralized control over *certain* spheres of life does not in any way rule out negotiation, manipulation, subversion and resistance; the shifts in the position of the various sites (and one could equally discuss the shifts in the position of different groups within the various communities, but this is beyond the scope of this paper) adequately demonstrate this point. Centralization is not foremost a measure of power, but also a symptom of the fragility of the system. Nor does political competition take place between neatly defined groups of allies confronting their primordial enemies. Alliances are almost by definition double-edged and precarious, and they always contain an element of competition and rivalry. This is where the dynamism of political life lies: the dividing line between centralization and delegation of power, between loyalty and aggression is thin, and can be reversed at any moment.

	MH I – II	LH IIIB
Political economy	kinship economy	palatial economy
Manufacture	household industry: dispersed, not specialized	craft specialization: aggregated, attached, centralized
Exchange	segmentary	hierarchical, controlled
Consumption	minimal differences	aggrandizing, competitive
Material culture	used to express affiliations	used to create distinction
Status	diffused, fluid, embedded in kin structure	defined by performance in competitive arenas <i>and</i> by descent

Table 5.6. *The kinship economy and the palatial economy.*

Conclusions

In this paper I discussed two different modes (Table 5.6), the *kinship economy* of the MH I–II period and the *palatial economy* in LH IIIB. However, my aim was not simply to draw a contrast between the two, but to outline the *process* of political centralization that led from the one to the other. This process involved not merely an increase in scale or in the degree of centralized control, but the pervasive structural transformation of a kin-based society to one permeated by rigid status distinctions within which entire communities and social groups attempted to negotiate their position. Centralization proceeded alongside expansion: I have tried to reconstruct the expansion of the sphere of influence of Mycenae and her allies by reconstructing the shifting network of alliances across the Argive plain.¹² I should stress that I am talking about spheres of influences of variable intensity and (in)stability, affecting more certain aspects of economic and political life – *e.g.* the acquisition of prestigious materials and objects, the participation in the network of alliances and diplomatic exchanges – rather than full control over all aspects of life. Although violence (or the threat of violence) must have played a role, we need not think in terms of grand military expeditions (though these may have taken place), but mostly in terms of strategic alliances and cunning manoeuvres, intermarriages and gift exchanges that leave their trace in the trail of valuable items consumed in life or deposited with the dead.

This is where the earlier discussion on the MH I–II segmentary networks of exchange becomes important. These networks may have been gradually distorted – but *they were not abolished*. Mycenae did not want to abolish the network of alliances, but rather to use it to her advantage in order to strengthen her position, exploit her allies and undermine her rivals. The process of political centralization became possible thanks to the manipulation of pre-existing alliances and the creation of new strategic coalitions. Equally, the process of social differentiation was accompanied by a renewed emphasis on kinship and descent. The traditional MH principles of organization may have been undermined and gradually eroded, but they also constrained and shaped social and political developments during the Mycenaean period.

Notes

Throughout this paper I will be referring to the unpublished version of Sjöberg's dissertation (2001) rather than the final publication (Sjöberg 2004).

No systematic analysis of the earlier part of the Middle Bronze Age has ever been undertaken; in fact, this period is one of the least investigated periods of Aegean prehistory. The research on the MH funerary and settlement evidence presented here has been carried out as part of a 5-year interdisciplinary project, the Middle Helladic Argolid Project, funded by the Netherlands Organization for Scientific Research, the University of Groningen and the Institute of Aegean Prehistory. For the aims and methods of the project, see Voutsaki (2005), or the website of the

Project: <http://www.MHArgolid.nl>.

The burial evidence from Argos is not included here: the dating of the earlier graves found in the Argos “tumuli” (Protonotariou-Deilaki 1980) may have to be reconsidered in the light of our study of the material (see Sarri, in Voutsaki *et al.* 2009). Nor will the settlement and intramural burials on the Aspis be taken into account as the architectural remains and most tombs date to the MH III period.

See Voutsaki 2004, for an explicit discussion of age and gender differentiation in the MH period. However, my analysis has now been superseded by the much more detailed and thorough investigation by E. Milka (carried out as part of the Middle Helladic Argolid Project; see above n. 4) who is comparing the mortuary data from the three large Argive cemeteries: Lerna, Asine and Argos. See Milka 2006; Milka in Voutsaki *et al.* 2005, 106–107; Milka in Voutsaki *et al.* 2007, 66–67; Milka in press. I thank Eleni Milka for allowing me to present some of her conclusions here.

The earlier studies by Nordquist (1979; 1987) remain fundamental, although our conclusions differ from hers in some respects. See also the more recent paper by Nordquist and Sundström (2005).

It is important to keep in mind that rich graves are found in other regions of the mainland: Aphidna (more recently Forsén in press), Kastroulia (more recently Rambach in press), Kolonna in Aigina (Kilian-Dirlmeier 1997) – though Kolonna may be said to be located at the margins of the mainland, or rather at the interface between the mainland and the maritime polities of the southern Aegean. They are, of course, rare.

It is not always possible to date the non-ceramic objects specifically to MH I–II, as they are sometimes found in unstratified deposits. For this reason, Table 5.2 (based on Nordquist 1987, 112–127) contains all MH manufactured or imported items found in Asine, and not only those dating exclusively to MH I–II.

Dietz 1980, 30. It should be pointed out, however, that the radiocarbon analysis carried out as part of the Middle Helladic Argolid Project (Voutsaki *et al.* in press) supports the early construction of the tumulus in the MH II period, but places the tomb with the golden band (1970–12), which Dietz dated to MH II, in the MH III period – although a MH II date cannot be fully excluded.

The discussion is based on the diversity index which I employed in my analysis of Mycenaean burials (Voutsaki 1993). It is based on a simple principle: after setting up a list of fairly detailed categories of non-ceramic offerings (consisting of 99 different categories, ordered by material, size and degree of elaboration), I counted the number of categories that were present in any one tomb. This score was the diversity index for each tomb; the higher the diversity score, the more diverse and richer the assemblage. This simple method circumvented (as much as possible) the problems of uneven preservation, but also the notorious problem of assigning value to objects.

For instance, in the summer of 2007 what seems to have been the entrance to an underground passage leading perhaps to a cistern or fountain (?) has been discovered in Midea (K. Demakopoulou, pers. comm.).

The evidence has also been collected by Burns (1999). However, he includes only the published objects, *i.e.* effectively only the finds from the Shaft Graves and the British excavations. I have consulted also all the preliminary reports published in the *Praktika tis Archailogikis Etairias*; hence the discrepancies between Burns’ (1999, 76, 87, 133, 164, 179) and my figures (see Table 5.5).

I have not been able to consult Rahmstorf 2002, and therefore the Tiryns figures for stone and glass items are only minimum figures. I have not counted items of precious stone from Mycenae, as they are not mentioned consistently in the preliminary reports.

The argument could be (and has been) extended further: we could connect the rise of the Argive centres, and of Mycenae in particular, to the demise of Aegina and Corinthia (Tartaron, this volume) the decline of the Laconian centres after LH II, and eventually the expansion of Mycenaean influence across the southern Aegean. Some caution is necessary: of course we are not in a position to connect Mycenaean expansion to specific mainland centres; in fact it is very likely that competition between emerging centers played a role in this process.

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POLITICAL ECONOMIES IN RITUAL: A COMPARATIVE STUDY OF THE RISE OF THE STATE IN PRE- AND PROTOPALATIAL KNOSSOS AND PHAISTOS

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In this paper I examine the patterning of the archaeological evidence for rituals, explore the types of ritual evidence, discuss the apparent overlap between religious and secular rituals, and clarify the power and efficacy of ritual at Knossos and Phaistos during the Prepalatial and Protopalatial periods.¹ At both Knossos and Phaistos there is evidence for large deposits of single events that involved eating and drinking, which I shall discuss here in the framework of cultural anthropologist Sally Moore's idea of "diagnostic events" (Moore 1987). I draw attention to the evidence for one-off, large diagnostic events and compare the structure of these rituals to the other contemporary rituals. In several discussions of the deposits at Knossos, reference has been made to the elites living at the palace using rituals to identify themselves, to justify their position in society, and to foster cohesion in the society. Recently, scholars of Minoan Crete increasingly describe an overlap between secular and religious rituals, but offer little evidence to validate this claim. Drawing on theories of religion, ritual, and anthropology, I attempt to bridge this gap between the identification of a ritual deposit and deciphering the solid meaning of the activities that took place therein. This analysis demonstrates how the boundaries between secular and religious rituals are frequently blurred and thus shifts the debate from one that focuses on a definitive identification of an assumed "pure" identity of a ritual to a more nuanced recognition that stresses the structure and patterning of ritual in the archaeological record. More specifically I explore the potential socio-economic and political impact of these rituals-as-events and attempt to explain them in relation to the differences between the two growing palatial economies at Knossos and Phaistos.

Secular and Religious Rituals and Their Efficacy

In contrast to previous generations of Minoan scholars, who frequently and often uncritically discussed religion, it is not uncommon in the contemporary archaeological literature on Minoan Crete to find scholars discussing rituals in a fashion that shies away from the use of the term "religion." Commonly they identify a ritual deposit and entitle it the remains of a "ceremony." By the end of the paper however the term "religion" has been substituted for "ceremony" and what began as a discussion of a large, unique ceremonial deposit turns to one of a religious ritual. Arguably, descriptions may have moved in this direction because it is assumed that religious rituals have more significant socio-political impact than secular rituals. Yet my analysis of the anthropological literature on the topic shows that secular and religious rituals often have similar archaeological patterns and cultural impact.

Scholars like Foucault and Moore emphasize that “there is no single order of things, ... no single episteme through which any culture sees the world” (Foucault 1973, xxii; Moore 1987, 735). They stress that the different elements, layers and discourses of a given community overlap and intermingle at all times; we cannot say that one event is purely social, while another is purely political. In this paper I purposely aim to examine the presence of rituals in the palaces wherein religious rituals were only one element of ritualistic practice. I have reserved the use of the term “religion” to indicate those activities where a primary aim is to interact with a supernatural order.

The overlap between religious and secular rituals often occurs both in a similarity of form, structure, location and timing, as well as in the ways in which ritual practitioners convey information and reinforce information, and strive to alter the elements of social structure. Scholars’ general acceptance that formality is an inherent element of religious ritual implies that religious ritualistic actions are not spontaneous, but follow a previously composed structure or order. This formality of style can be used even in cases where the actions are claimed to be spontaneous, *e.g.*, in many different religions in which adherents claim that rituals are spontaneous and not formal. On closer examination, however, it is clear that they are indeed formal to some extent since they comply with certain repeated forms and norms, and act spontaneously in limited circumstances where the spontaneity is itself the formal element. It also implies that the actions carried out in the ritual are authored by a person or group of persons, not necessarily present, prior to the occurrence of the ritual. The formality of a ritual means that it is carried out in accordance with some elements of recognized conventions, which have been used and reused, and have become stylized and therefore are easily identifiable by the participants as belonging to the ritual. The density of elements of any ritual that are prescribed or authored by a person/s distanced in time or space can vary; the ritual is still valid as long as enough elements are present for the participants to recognize the ritual and understand the overt intention of the main participants. Suffice it to say that some elements of the ritual must be repeated over time for it to be classed as ritual; the necessity of repetition in ritual is an inherent element of its formality. This repetition does not mean that the ritual is repeated immediately after one occurrence of it is complete or underway, but that over time it is repeated as part of a regular procedure. Repetition of ritual is one of its main criteria when trying to identify it in the archaeological record.

Some degree of repetition often is visible even in a newly instigated ritual because, as Myerhoff argues, newly formed ritual usually cloaks its newness and claims authority by including elements borrowed from other accepted rituals (Myerhoff 1977, 200–201). Often, the “distantiation” of authorship is used to identify religious rituals; this means that the people who are performing the ritual did not compose it, but rather that its authors are distant in both time and space. Barrett elaborates on the “distantiation” of authorship in rituals and explains its role and effects on the performance of ritual (Barrett 1991). This element of the rituals gives a transcendental and timeless quality to the rituals themselves, to those who have access to them, and to those who are allowed to implement the rituals. However, this is a factor that is common to all formal rituals, not just those of a religious nature.

Another common trait of rituals is that they are conventional acts of display through which one or more participants transmit information concerning their physiological, psychological, or sociological states, either to themselves or to one or more other participants. Leach states, “ritual action and belief are alike to be understood as forms of symbolic statement about the social order” (Leach 1954, 14). These elements of ritual, as

Rappaport notes, are not unique to religious ritual and can be equally applied to animal and human mating rituals or rituals of aggression (Rappaport 1971).

This significance of a ritual lies in its symbolic elements. The physical behavior of the participants “stand for” relations of another kind, as between humans and an aspect of nature or humans and putative spirits (Firth 1967, 12). This definition introduces the unseen component that plays a part in rituals. It stresses the non-empirical element of rituals, and the efficacy of ritual that extends beyond the physical plane. These unseen or non-empirical elements of ritual include the believed presence of active supernatural beings or orders participating in the ritual; the paradoxes that Myerhoff claims to be inherent in the ritual (*i.e.*, the ritual states one thing about the situations but the reality is another); and the force or power of a ritual to enable, empower, or make people act a certain way. These elements of ritual, although important in religious ritual, are not unique to it. One can point to numerous political and social rituals where unseen elements also play a large and fundamental role. The role of unseen elements in non-religious ceremonies is discussed by Myerhoff in relation to a Jewish graduation ceremony, to Indian-Mexican political interaction by Hunt, political gatherings by Moore, and to a birthday party by Colson (Myerhoff 1977; Hunt 1977; Moore 1977; Colson 1977).

From these studies, we see that rituals in all areas of life, irrespective of the essence or cause of the ritual, have similar elements inherent in them: formalization, repetition, boundedness, and communication of information (Colson 1977; Firth 1967; Hunt 1977; Moore 1977; Myerhoff 1977; Rappaport 1971, 1999). The vast variety of ritual types has similar levels of validity and power to enact change and to mirror and instigate social, political, religious, and economic processes.

Much of what Rappaport argues as being true for religious rituals is equally true for non-religious rituals: ritual communicates different types of information to the participants. They include information about the religion, society, or social structure as it is at that moment in time and place, or how it is on an ideal level, which is unverifiable and enduring, and how it is on the material level, which is ephemeral and visible. Rappaport divides these types of communication into the self-referential on the one hand, and the canonical on the other (Rappaport 1999, 52). The self-referential messages are those statements included in the ritual that describe the contemporary physical, psychic, and social states of the group or of the individuals in the group (Rappaport 1968, 23, 1999, 52; Leach 1954, 11). This class of messages is flexible and changes in relation to the groups of individuals that are participating. The other aspect of human ritual is the canonical. These parts of the rituals are prescribed. They can form the structure of the ritual or parts of the ritual that must be carried out in a certain manner. They have been composed and carried out before the immediate performance of the ritual. The participants in the ritual cannot change these prescribed elements on a whim if the ritual is to remain effective and true to itself. The participants in the ritual perform the prescribed elements and transmit the messages contained within them, despite the fact that some other person or group of people has encoded these messages in the ritual. Rappaport also notes that the participants in the ritual become indistinguishable from the messages transmitted in the ritual (Rappaport 1999, 119). These two types of messages hold both the temporal and the durable part of religion and of ritual. One of the main elements of any religion is the concept that the religion is enduring despite the changes in the variables of it, *e.g.*, the people involved, the level of devotion or belief of the people.

Rituals also aim to bring about changes in circumstances. These changes are caused through interaction with the supernatural. Changes that are brought about by ritual take

place in an unseen manner. Leach explains this by dividing action into two categories; expressive action where the change resulting from the ritual takes place on a symbolic plane, and therefore is not visible, and technical actions where the actions pertain only to the physical world (Leach 1976, 9). The latter can be seen and are empirical (*e.g.*, digging a hole). In the first instance, a statement is made about the state of the world as it is or as it is ideally seen, or else purports to alter it in a physical way by symbolic means. The main changes that occur during this ritual are not visible nor are they on a material plane. Such changes include initiations into religions or a new status within the religion where no change is perceptible on the physical plane. In the second instance, all elements of the action occur on the physical and empirical plane; one can see the digging taking place for the hole and can empirically witness the change in the physical plane after the digging. The outcome of ritual and the change brought about by it are equally accepted with the same certainty as are the changes on the physical plane. It must be pointed out here that although the changes in circumstances are brought about by the ritualistic interaction with the supernatural, the interaction with the supernatural is not the only reason why the changes are accepted as authoritative. The formal element of the ritual, the repeated pattern, and the association with uncommon knowledge all add to the *gravitas* of the ritual and therefore the acceptance as authoritative of what it instigates.

During religious ritual, the changes are given their authority by the interaction with the supernatural. The implications of this interaction are not confined to the religious sphere but reach far into the society in general. The society is composed of those who participate in the ritual, and those, if any, who, for a multitude of reasons, may be excluded from it. These people may be excluded from the rituals for several possible reasons, *e.g.*, they are not members of that religion (by initiation through prior ritual certification), or they do not qualify to participate, either by exclusion as a punitive factor, or they lack the required elements to be allowed to participate, such as age, sex, or skills.

Ritual action also may effect the alignment and the realignment of the social order, the allotment of lands, and distribution of power among those who possess certain kinds of esoteric knowledge. Sociological shifts such as these stem from the fact that ritual is an expressive action, as discussed above (Leach 1954). Rituals may alter the status and position of people, their relationships with one another, situations, ownership and many other elements of life that stretch beyond more religious sphere. These changes are not merely limited to the participants of the ritual. They also affect those who do not participate in the ritual. Familiar examples of such changes sanctioned by religious rituals are marriage, conferring of rulership (though coronation or inauguration), and declaration of peace and reconciliation at the end of conflicts. In the case of the inauguration of a ruler by a religious ritual, the authority of the ruler is not valid over merely those members of the society who participated in the ritual or even profess a belief in that religion. The instigation of peace at the end of conflict in small-scale societies through a religious ritual means that even if individuals still feel aggressive towards another party they are not free to act on this feeling without incurring penalties from the rest of society.

From the preceding discussion of religious ritual, it is clear that there are several levels of life affected by religious ritual. The first is a non-empirical level, (*i.e.*, a level that is not sensible to non-participants) where humans interact with the supernatural. The second is a symbolic level where changes are enacted through the ritual. The third is the purely physical level where the ramifications of the changes enacted by the ritual may have implications for the secular world such as relationships, land-tenure, societal and social order alignment, and the power of those in possession of esoteric knowledge.

As we have seen from the discussion above, religious ritual is different in essence from secular ritual but on the surface they look similar since they have similar defining characteristics such as formality, stylization, repetition, and a conventionalized form. We should expect to find these formal, repetitive and bounded elements of ritual in the material deposit. A material deposit that fits those characteristics may be identified then as ritualistic. But identification of elements that connect the deposit to interaction with the supernatural must be consciously sought in order to define a deposit as a religious one.

Diagnostic Events

Moore points out that much of our understanding of cultures, derived from anthropological research, is incomplete because it is formulated by the chance observances of the anthropologist (Moore 1987, 727). Such an observation can be equally applied to archaeological understanding of past societies: our findings are only slices of a culture – what Moore would call evidence of frozen local moments. Moore classifies these frozen local moments as “diagnostic events,” *i.e.*, “events that within their content display multiple meanings *in combination*” (Moore 1987, 735). Moore argues that within these diagnostic events it is the juxtaposition of “competing and contrary ideas and of actions having contradictory sequences that requires analysis” (Moore 1987, 735). She also stresses that while great social energy is invested in the event to attach an official meaning to the communication, as it plays out, however, the event can frequently have ambiguous and contradictory counterparts attached to it (Moore 1987, 735). Therefore even with partial evidence we can glean a deep understanding of the related cultural dynamics. I believe that our appreciation of the limited findings from Prepalatial and Protopalatial Knossos and Phaistos, which have suffered from being built over by the later palaces, can benefit from being studied within this framework of diagnostic events.

Evidence for Rituals at Knossos and Phaistos

Our understanding of the palatial societies at Knossos and Phaistos is that they were clearly controlling the economies as evidenced by their large amounts of luxury goods, large architectural centers, and storage areas. It is equally understood that the palatial elites were controlling the people politically, as they have access to large amounts of manpower to construct the palaces, access to long-distance trade, and manufacture the luxury goods. Our assumption is that they were also controlling religion and rituals in order to maintain, create, or legitimate their position, acculturate the community, and educate people. In this paper I assume, like others who have studied this material before me, that the rituals carried out within the palaces are controlled by those who are most inherently connected with the palace and those people are the economical, social, political, and religious elites. That is to say that the rituals that are conducted in this area are organized by them and not by a group who are coming into the palace area to make any claims to connections with the palace or to stand in opposition to the palace.

At Knossos there are two very different types of rituals and places for rituals. There are small closed rooms with limited access, such as the Loom Weight Basement, deposits that are argued to be religious, *e.g.*, the Vat Room Deposit, and large deposits of ceramics with limited repertoires in the west court area. The artifacts from the first two groups date to the Protopalatial period while the large ceramic deposits date to both Prepalatial and Protopalatial periods. Similarly at Phaistos there are large Protopalatial deposits with a limited range of pottery shapes found in open spaces, small rooms with limited access in the

Upper and Lower West Court areas and a cave on the edge of the palace acropolis. An overview of the arguments and artifacts demonstrates that only the large-scale ceramic deposits can be securely argued to be ritualistic in nature and a tentative ritual identification given to the cave.

Knossos: Vat Room Deposit

The Vat Room deposit, published by Evans in *Palace of Minos* I, was found beneath the pavement at the entrance to the early magazine that opens immediately north of the east pillar room (Evans 1921, 165–171). The exact location of the Room seems to be lost as Evans refers to it as being on the North side of the east Pillar Room. Pendlebury reports the location as being near the cists against the north wall of the Vat Room (Evans 1903, 94–98). It consisted of a pit of 1 m deep that cut into the Neolithic layers of the area. It contained a variety of pottery, an obsidian slab, faience beads, faience inlays, shell plaques, gold plating, stone vessels, and a figurine fragment. Evans thought that the figurine fragment was part of an early snake goddess and because of this and the “choice character of many of the relics” found there that it should be identified as a cult deposit (Evans 1921, 170). Panagiotaki concludes that the ivory arm of a figure, the amount of luxury good of rock crystal, gold, faience, and ostrich egg and a set of the same pots such as beaked jugs point to this being a cultic deposit. She postulates that it is either the burial of shrine material or a foundation deposit (Panagiotaki 1998, 183).² Panagiotaki dated the deposit to MM IB or early MM IIA and argues for a synchronous deposit in a pit.³ MacGillivray identified the material as MM IIA and contended that they consist of the remains of several floor deposits rather than one single event (MacGillivray 1986, 47–49; Momigliano 1991, 198 concurs with MacGillivray’s dates).

According to Gesell the only Protopalatial sanctuary at Knossos is the MM IA Pillar Crypt in the House of the Monolithic Pillars (Gesell 1985, 13 and cat. 51). The excavators thought it was a cult room because it had a pillar, a pit, hieroglyphic sealings with double axe symbols and a dove vase. Gesell reports that a similar vase was found in the Pillar Crypt of House Theta at Mallia (Gesell 1985, 13 and cat. 84). Hägg argues that during the Protopalatial period, in the area of the Neopalatial East Hall, based on the evidence presented by Evans, there were two phases of cultic activity in this area; the Shrine of the Dove Goddess/Monolithic Pillar Crypt in MM II, which contained terracotta models and loomweights and the early East Hall in MM III which contained a spiral fresco and bull relief (Hägg 1995, 367; Evans 1921, 248 and following). The deposit from the upper room consisted of more than 400 loomweights and various terracotta models, which were described as “altars, a columnar shrine and a palanquin.” Gesell identified the artifacts as a sacred columns, altars with horns of consecration, and an incurved altar. She argues that the sacred nature of the columns is shown by the perching birds, which were recognized as symbols of the goddess in the later periods. The evidence presented by scholars for the identification of this deposit as the remains of a religious ritual area is weak. There is no reason to identify columns with birds as purely religious, or even horns of consecration despite their conventional name. Both Hägg and Gesell use later evidence to support their arguments.

Gesell identifies a MM IA house cult in the two houses excavated under the koulouras in the west court. The deposit included horned masks and animal figures and the head of a human figurine (Gesell 1985, 13. Pendlebury and Pendlebury 1928–30, 53–73). She suggests that the red plastered circular depression in the floor of one room with a central cupule probably doubly served as a hearth for cooking and heating but also as an offering

table, because of its similarities to the offering tables found in the sanctuaries at Phaistos (Gesell 1985, 13). An abundance of work done on the multivalency of figurines in any given society shows that to claim all figurines as religious is unsubstantiated (Tzonou-Herbst 2002; Ucko 1968). The identification of the hearth as religious is also groundless. Traditionally, many of the hearths have been identified as religious because of an assumed connection with offering tables, but this association has recently been undermined (Muhly 1984; Murphy 2003, 154–159).

Clearly both the Vat Room Deposit and the deposit from the Loomweight Basement are unusual in so far as they are a mixture of different types of objects, which alone could suggest that they were not a common type of assemblage. But there is nothing convincing to argue for them being either ritualistic or religious in the sense of either being repetitive or aiming to interact with a supernatural order. However, clearly in the case of the Vat Room Deposit there was great intentionality in the burial of the objects, but to what end is unclear.

The evidence for religious ritual activity inside the palace of Knossos rests on several assumptions about the essential nature of certain objects that have been categorized as cult equipment. None of the objects can be securely argued as being religious in their own right, as this argument decontextualizes them from their archaeological context and argues that everywhere these objects are found is a religious area (Murphy 2008).

Phaistos

At Phaistos three areas have been argued to be religious: the upper west court, the lower west court, and Grotto M to the southwest of the palace. Previous studies on this topic have shown that the upper west court area is more likely a secular kitchen area and the lower west courts a combination of storage, production and office areas (for a full discussion of the evidence for Phaistos see Murphy 2006). Grotto M seems to be the only potential religious area, based on its liminal location in a cave and at the edge of the palace area, its lack of evidence for a secular function, and the presence of possible focus for a ritual.

Based on this brief overview of the evidence, at both palaces secure evidence for rituals that are privately held inside the palace with assumed limited access to outsiders is lacking. Our problem is that we are trying to use the same methodology when examining both mono-functional sites, like peak sanctuaries and mortuary sites, and multi-functional sites like settlements and palaces. We are looking for areas dedicated to religious rituals as defined by several deposits of similar material objects in the same space, which is what we find at the tombs, peak sanctuaries and caves. But we do not find this in the palaces during this period. This methodological issue may explain the apparent absence of an explicit ritual signature in the palaces.

Large Scale Deposits

Extensive work on the Prepalatial and Protopalatial pottery at Knossos by Andreou, Day, Momigliano, and Wilson suggests that there are a handful of deposits that may have been used in drinking/feasting ceremonies. They stand out because they have a very limited repertoire of pottery shapes and fabrics and therefore differ from the usual domestic assemblages (Andreou 1979; Momigliano 2000; Wilson and Day 2000; Wilson 1984, 1985). These deposits date to both the Pre- (EM I, EM IIA, EM IIB) and Protopalatial periods and have been found in the area of the North-East Magazines, beneath the West Court, and the North West Quarter of the palace (Wilson and Day 2000, 60). They consist predominately of drinking and pouring vessels. In the earliest deposit, the evidence for food

consumption is very tentative, but in the later deposits, based on the presence of serving vessels and bowls, it seems more secure. The deposits can be classed as ritualistic based on the formality, standardization, and density of intentionality evidenced in them. They are also ritualistic in the sense that they are repeated, but it should be noted that the repetition is infrequent. Wilson and Day argue that their large size and the amount of energy invested in the decoration of the ceramics indicate that they were intended for conspicuous display and that there was a high level of symbolic value in these vessels (Wilson and Day 2000, 58, 60). They connect this “ritualized social practice” with beliefs in the ancestral importance of Knossos and contend that such ceremonies could be exploited to exclude certain sections of society and allow the manipulation of belief to create and maintain a social order (Wilson and Day 2000, 61–62).

According to Wilson and Day’s studies of the EM pottery at Knossos (for contrary examples of deposits that contain a larger repertoire of ceramics see Batten 2000, 75), the Well deposit from the North-East magazines that Hood excavated in 1958–1959 is the largest and best preserved EM IA deposit (Hood 1966; Wilson and Day 2000, 25, 52).⁴ It was a burnt deposit that Wilson and Day argue to be a single destruction event that was dumped in the Well at one time that represents the remains of a communal ceremonial activity of drinking and possible eating. The pottery predominately consisted of a large number of similar pedestaled bowls and chalices (Wilson and Day 2000, 52, 59–60). They also draw attention to the EM IIA deposits beneath the West Court and North West Quarter of the later palaces. These deposits consisted of decorated drinking, eating and serving vessels (Wilson 1985 and 1994, 32). Deposits dating to EM II B, with similarly functioning pottery, were found bordering on and beneath the later south front of the palace. The EM IIB deposits were larger than the early ones (Wilson and Day 2000, 60; see also Momigliano and Wilson 1996, 1–57).⁵ Wilson and Day suggest that these were also from single event ceremonial drinking/feasting practices (Day and Wilson 1998, 2002). The deposit consists mainly of spouted bowls, jugs, and goblets. During EM IIB similar deposits of stemmed goblets and shallow bowls are again evidenced with the introduction of the long-spouted jar or teapot (Day and Wilson 2002, 151; Momigliano and Wilson 1996, 30–43; Day and Wilson 1998). Wilson and Day identified these as single deposits of functionally specialized pottery. There are several similar deposits from the end of the Prepalatial period. One such deposit is from the Upper East Well beneath the Northeast Quarter of the palace (Andreou 1979; Momigliano 1991, 155–63; Cadogan *et al.* 1993). In the Northwestern Quarter of the palaces there are several contemporary deposits in the fill that Wilson and Day interpret as the debris for a single event or a small number of similar events (Wilson 1994, 32; Day and Wilson 2002, 151).⁶ These deposits have a large number of footed goblets, jugs, and individual serving or eating vessels in the form of shallow bowls (Day and Wilson 2002, 151).

During the first palace period there were several large deposits of drinking and pouring vessels found in and around Knossos, most notably under the West Court, that Day and Wilson argue to be the remains of large scale, possibly ceremonial, consumption of drink (Day and Wilson 1998, 350–351, 356). Wilson and Day also reported that there were similar large deposits in Phaistos, but as yet there is no detailed publication available. Wilson and Day argue that Kamares ware is symbolic of hierarchy and power in the Protopalatial period because it is found in large quantities at the palaces of Knossos and Phaistos, the Kamares cave, and rarely elsewhere (Day and Wilson 1998, 351–352). They suggest, based on the work of Betancourt and MacGillivray, that the vessels were made in functional groups for their conspicuous consumption in ceremonies held at the palaces (Day

and Wilson 1998, 352; Betancourt 1985, 97–100; MacGillivray 1987, 274). Day and Wilson tie in the trading of the high level pottery to Renfrew's ideas of peer-polity for the palaces based on competition and emulation (Day and Wilson 1998, 356; Renfrew 1986, 8). Day and Wilson stress the visual display of Kamares ware, polychrome, metallic traits, elaborate shapes, and suggest that they were intended to be used in display (Day and Wilson 1998, 356).

Wilson and Day connect these deposits with drinking and feasting ceremonies that they ultimately conclude to be religious in nature. They draw attention to the change in the types of vessels being used in EM IIA when they shift from communal to individual use cups and bowls. They connect this shift with the growing trade and contact on the island, and suggest that "it may reflect a breakdown of traditional ties and relationship within societal groups, with individuals now subject to a higher, perhaps more powerful structuring agency: the emerging elite" (Day and Wilson 2002, 152). For the Protopalatial period at Knossos, Wilson and Day stress the presence of both craft production and ceremonial/religious activities that both can independently lead to power (Wilson and Day 2000, 61). They point to Mary Helms' conclusions that there is great political power to be had in emphasizing connections with geographical places associated with the first settlers of the house or polity (Wilson and Day 2000, 61; Helms 1998, 79–80).

Day and Wilson draw attention to Hamilakis' indication of the importance of feasting and communal drinking ceremonies in bolstering and legitimating the power of ruling elites in the Neopalatial period. He links the rise in the numbers of large deposits of conical cups to increased feasting as social mobilization and the intensification of the exploitation of the olive and vine (Day and Wilson 1998, 356; Hamilakis 1996). Day and Wilson conclude that "we should see the Protopalatial palaces as the setting such ceremonies involving food and especially drink, perhaps within a cultic context" (Day and Wilson 1998, 357; MacGillivray 1987, 287–289). They suggest that Knossos is a monumental structure, which consumes and deposits, which is concerned with social mobilization, ceremony and perhaps ultimately domination (Day and Wilson 1998, 357). They argue that Kamares ware make up an important part of the ritualized activity within the first palaces at Knossos and Phaistos (Day and Wilson 1998). The deposits indicate specialized and repeated eating and drinking practices on a large scale. The prestige status of the potter supports the theory that the feasting activity was exploited by an elite (Day and Wilson 1998, 357).

Wilson and Day, although stating in a passing comment that it matters little whether these ceremonies were religious or not (Day and Wilson 2002, 152), conclude that they were indeed religious ceremonies and state that "The principal forum in which such inter-polity competition may have taken place was at the palatial centers in pan-polity gatherings, with the focus on religious ritual within the palaces themselves" (Day and Wilson 1998, 357). They draw support from Moody who says that in a ranked society such ritualized practice can take on a symbolic meaning and evolve into religious festival where spiritualism rather than wealth is monitored and supernatural favors instead of food are redistributed (Day and Wilson 1998, 357; Moody 1987, 240).

However, incorporating these data into the research presented at the start of this paper shows that it is equally plausible that these ceremonies were indeed secular and the non-empirical changes can take place without the use of a supernatural order. Two of the key elements of these rituals are their structure and location. They are held in marginal, yet public areas of the palace, similar to the open areas at the tombs, and only a limited group of people was allowed to partake of them. The structure of these rituals – food/drink consumption ceremonies held in liminal areas – is also shared by the more widespread

rituals at tombs and peak sanctuaries. Damiani-Indelicato, Nikolaidou, Marinatos, Branigan and Tenwolde had all drawn attention to the public communality of the west courts as an area that connects the palace to the local community (Damiani-Indelicato 1982; Nikolaidou 2002; Marinatos 1987; Branigan 1993; Tenwolde 1992). MacGillivray argues that the monumental façade of the palace acted as a barrier between the community and the palaces on symbolic and ideological levels (MacGillivray 1994). The separation between the participants in the ceremonies and those organizing them was physically emphasized by the monumentality of the palace complex. This activity at the palaces mirrored the activity at the contemporary tombs in south, central, and east Crete. It is important to note the significance of the changes in EM II B at both the palaces and the tombs suggesting a growing importance of ritual, drinking and eating rituals in particular, in the cultural discourse. The structural similarities between the rituals at the tombs and the palaces suggest that they were purposely using a familiar structure to legitimize the rituals. As outlined at the start of this paper, the comparability of the structure of the rituals suggests that organizers of the rituals were using the power inherent in ritual but has no indication that the rituals needed to be religious in nature.

Despite the similarities in the drinking and eating components of the rituals, there are some significant differences. The rituals at the tombs seemed to have been repeated frequently in contrast to those at the palace. As a classification of cultural action, it is beneficial to draw on Moore's theory of diagnostic events to understand and explain the rituals at the palace. Such events can create and air contradictions in the society reinforcing the connections between the groups participating in the rituals and simultaneously emphasizing their separateness. According to her classification we can interpret these deposits as the remains of "local moments," as elements frozen in time that indicate the simultaneous emphasis on cohesion and separation (Moore 1987, 735).

The deposits at Knossos that show large-scale gathering in the Prepalatial period (Wilson and Day) are infrequently repeated over time. They are not as densely repeated as the similar deposits in the contemporary tombs. They meet the defining factors of ritual as an action that is repeated over time in a similar places, with similar objects, with a similar purpose, with a distantiated authorship. However the social or political efficacy of a ritual depends not on a de facto presence of all these factors, just on some.

Conclusion

From this brief overview of the archaeological remains and discussion of evidence for ritual and religious activity at Knossos and Phaistos during the Pre- and Protopalatial period, it is apparent that the most significant remains of rituals are those of the large-scale deposits in and around the west courts of the palaces. These rituals in structure and social meaning mirror and complement the rituals being carried out at contemporary tombs. The events from which this material comes can give us an explanatory power if we explore them in the context of diagnostic events that simultaneously emphasized different social impacts of the ritual – one of cohesion and unity of groups of different social status and possibly affinities, and another of separation of these groups into distinct units. This inequality is stated through the practice of the rituals and their location at the edge of the palace in the shadow of the palatial facade. The discussion of the efficacy of ritual shows that the question of whether these rituals were religious or not is not as simply answered as once thought. Secular and religious rituals have archaeological patterns and a similar social impact. It is clear that when trying to locate ritual areas in the rooms in the palaces we are faced with a

methodological issue. The ritual signature in the palaces is not as clear as it is on the contemporary specialized sites of tombs and peak sanctuaries which have a high density of ritual remains, are commonly used over long period of time, and are frequently not cleared out. Despite the lack of clear evidence for rituals inside the palace, it is clear that the palaces were using rituals as a way of creating and reinforcing their superior identity in the society.

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Notes

Due to space constraints and because I have discussed the evidence for religion at Phaistos elsewhere, I only give the briefest of summaries of it here.

Momigliano (1991, 268–269) stresses that the removal of the dating of MM I for the vat room deposit removes the idea of cult and occupational continuation from the Prepalatial period through the Neopalatial period in this area.

See Panagiotaki (1998, 182–183) for conclusion about it being a pit, 184 for date. She suggests it may also contain some elements from a working area. See also Gesell 1985, 13 and cat. 33d; Panagiotaki, 2000, 487; Cadogan *et al.* 1993.

Hood 1966 dates the deposit to EM I. Wilson and Day (2000) date it more specifically to EM IA. See also Wilson and Day 1994; Hood 1990, fig. 8.4.

Wilson and Day (2000) stress that nothing comparable to the size of these deposits have been found elsewhere in North Central Crete.

The question whether these were the results of one single event of multiple small events is extremely significant for our interpretation of the scale and social type of ritual being carried out.

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REEVALUATING STAPLE AND WEALTH FINANCE AT MYCENAEAN PYLOS

Dimitri Nakassis

Recently there has been a notable shift in the way Mycenaean palatial economies are modeled. Whereas previous studies emphasized the role of the palaces as redistributive centers in an economy dominated by staple goods (staple finance), recent scholarship has argued forcefully that the political economy was heavily dependent on the production and exchange of high-value prestige goods (wealth finance). Although recent work has improved our understanding of the complexity of Mycenaean political economy, the study of Mycenaean state finance remains to a large extent at the level of generalization (cf. Smith 2004, 86–87 on the limitations of most models of state finance). That is, the social contexts in which staples and wealth are mobilized and distributed by the state and other bodies remain understudied, in part because the empirical data are typically interrogated at a culture-wide level, obfuscating how palatial finance worked at regional and micro-regional scales (for an exception, see Galaty, this volume).¹ Moreover, quantitative aspects of palatial distribution have been overlooked, with the result that the scale of palatial finance is not well understood. In this paper, I re-evaluate the empirical evidence for the use of staples and wealth in the political economy of the Pylian state in southwestern Greece through study of Mycenaean administrative texts. I argue that the dichotomy between staple and wealth finance is less useful for understanding the Pylian economy than the model proposed here, in which finance is measured along two continuous axes: one which measures the material involved (from staples to wealth) and another which measures the extent to which the goods allocated are convertible or transferable.

The decipherment in 1952 of Linear B, the administrative script of the Mycenaean palaces, provided a great deal of evidence about Mycenaean political economy. Economic historians were quick to realize that these texts largely recorded the collection and distribution of foodstuffs, including wheat, barley, olives, figs, and livestock, in the absence of a standard medium of exchange (Finley 1957; Polanyi 1960 = Polanyi 1968, 306–334). They modeled the Mycenaean palatial economy as a “massive redistributive operation” (Finley 1957, 135) in which most, if not all, of the annual produce of the polity flowed into the storage rooms of the palace to be distributed as rations to palatial dependents.

The concept of wealth finance was applied to Aegean states by Paul Halstead as part of a larger argument whereby he challenged Renfrew’s model of the origins of Aegean states, which privileged redistribution (Renfrew 1972, 296–297; cf. Service 1962, 144–152). Halstead showed that the cornerstone of Renfrew’s model of the emergence of the palaces as redistributive centers, namely local specialization, lacked empirical support (Halstead 1988). He further argued that redistribution was conceived too monolithically, and pointed out that redistribution included practices as diverse as pooling and mobilization (Earle 1977). Halstead proposes that the Mycenaean economy was driven by wealth finance. He points out that the palaces were heavily invested in craft production, and that goods manufactured by palatial workshops have been found in tombs (Halstead 1992, 63). These

goods, it is argued, constituted a wealth finance system whereby palatial craft products were allocated to individuals in exchange for goods and services (Halstead 1992, 72–74). Furthermore, Halstead suggests that these high-value goods were fungibles that could be exchanged for staples (Halstead 1992, 58; 2007, 68).² This model was taken further by Galaty and Parkinson, who suggested that Mycenaean states relied almost entirely on wealth finance in the form of non-fungible markers of status, at least on a regional level (Galaty and Parkinson 2007, 26). That is, “almost all the subsistence goods documented in the Pylian texts would have been used to support specialists and generally to mobilize goods and labor that eventually resulted in the production of elite goods” (Parkinson 2007, 98).

Strictly speaking, wealth and staple finance are defined purely “on the basis of the form in which the material support is mobilized” (D’Altroy and Earle 1985, 188; on staple finance, see Polanyi 1968, 185–188, 321–334). Staple finance is characterized by obligatory payments to the state in the form of basic goods common to all households, such as foodstuffs, livestock and simple cloth, which are then used to finance state activities, particularly the support of dependent labor. Wealth finance, on the other hand, employs high-value goods, often manufactured products, to fund state operations. These valued goods are acquired through exchange, levied from local populations, or produced by attached craft producers. The categories of staple and wealth are primarily heuristic, since the goods used by states fall along a continuum of value (for a discussion of the types of materials designated as valuables in pre-monetary economies, see Earle 1982). For example, while simple cloth could be considered a staple good, there are also high-value textiles produced by specialists, which could have been given as gifts in royal exchanges, and other textiles were valued at points in between (Killen 2008, 181–184). Moreover, states typically employ staple and wealth finance in combination, not one to the exclusion of the other. It is often the case that staple finance is used to support attached craft specialists, who produce high-value craft items to be utilized in a wealth finance system (Earle 1978, 184–185; Brumfiel and Earle 1987). Indeed, this use of staples to finance the production of wealth is the cornerstone of the Mycenaean economy in both wealth finance models (Halstead 1992, 2007; Parkinson 2007). Nevertheless, the distinction between finance in staples and finance in wealth is valuable, because each system has quite different advantages and disadvantages. Staples are often difficult to store and to transport, but represent the utilitarian materials required for subsistence, while non-staples are durable, easily transportable, and typically of high value.

While staple and wealth finance are formally defined by the materials employed, the former is typically conceived as straightforward allocations of staple goods, often in the form of rations, while the latter is often, but not always, described as establishing relations of power (for wealth finance models that emphasize the convertibility of wealth, see D’Altroy and Earle 1985, 188, 193–194; Halstead 1992, 2007). That is, staple finance is economic, while wealth finance is political or ideological (Brumfiel and Earle 1987, 3–4; Earle 1994a, 74; 1994b, 445–447). Timothy Earle has argued that as social complexity increases, the contexts of the exchange of wealth become more politicized, and goods become more distinctive and durable (Earle 1982, 80). As a result of this politicization of prestige goods, there arise limits to the exchangeability of prestige with non-prestige items, what is commonly referred to as “ordinal ranking systems” or “spheres of exchange” (Earle 1987, 69; Gregory 1980; 1994, 918–919; Sahlins 1972, 277). Under these conditions, wealth finance acts to stabilize polities whose territories have grown so large that centralized collection of staples, especially foodstuffs, is no longer practical; the distribution

of goods that mark status provides a method for the central authority to maintain control over provincial elites (Blanton and Feinman 1984; Brumfiel and Earle 1987, 6; Earle 1987).

Thus, there is a critical break between the definitions of staple and wealth finance and their application in the archaeological literature. In fact, it is clear that both staples and wealth can be distributed in different ways that correspond to different social contexts of exchange. For example, staples can be issued as rations to provide basic subsistence to dependent laborers, or as supplemental handouts (hence Ruth Palmer's distinction between rations and handouts: R. Palmer 1989, 1992). Alternatively, they can be mobilized for consumption at large, public feasts advertising the generosity of the host and creating social relationships between participants (Dietler 2001, 73–79; Dietler and Hayden 2001, 13; Hayden 2001, 29–30). Wealth can take the form of coined money paid by the state, or it can constitute a prestige good, such as a well-crafted sword or an elaborate bracelet. Thus, in theory staple finance can be ideological, and wealth finance can be economic.

I argue that the status of a given type of finance as “economic” or “ideological” is related to the crucial issue of convertibility. Economic disbursements of staples and wealth are made in such a way that the goods being distributed are easily transferable to other individuals and convertible into other goods. Moreover, economic payments have the effect of ending an obligation (Polanyi 1968, 322). Ideological disbursements, on the other hand, are not easily transferable or convertible, because of the symbolic value placed on participation in the exchanges involved, and they often create an obligation to reciprocate. Reciprocal exchanges can take place when the individuals involved are of different social ranks; as Sahlins perceptively notes, “the entire political order is sustained by a pivotal flow of goods, up and down the social hierarchy, with each gift not merely connoting a status relation but, as a generalized gift not directly requited, compelling a loyalty” (Sahlins 1972, 206). On rank and reciprocity, see Mauss 1990 [1925], 77; Sahlins 1972, 204–210). Wealth is often understood as being distributed via reciprocity, but it is also true that foodstuffs distributed at feasts create systems of debt and obligation; they moreover emphasize commensality, with the result that the staples involved are not transferable (Dietler 2001, 76–85). At historical Greek sacrifices, it is often the case that all food must be consumed within the sanctuary (Burkert 1985, 57, 369, n. 15). This lack of convertibility in ideological exchanges obscures a different conversion, what Bourdieu terms “symbolic violence”: the transformation, misrecognized by social actors, of material goods into social and symbolic capital (Bourdieu 1977, 190–197; 1990, 118, 122, 125–126, 133).

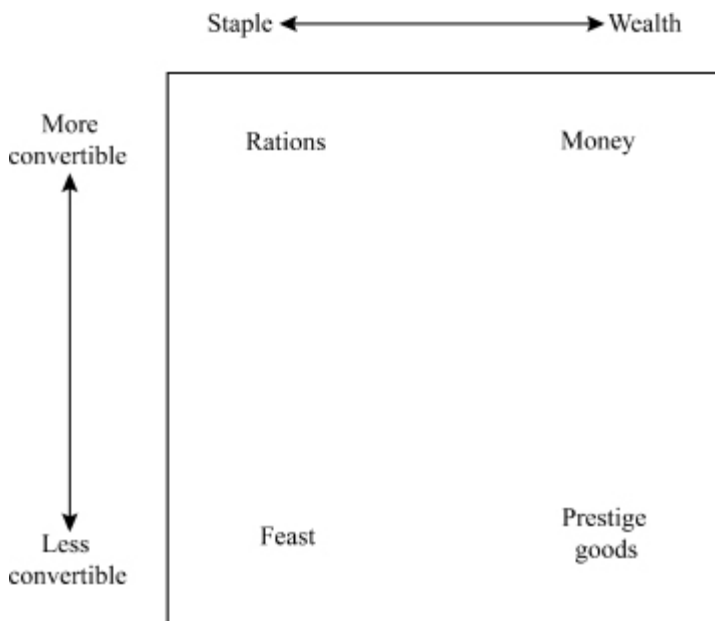


Figure 7.1. Types of staple and wealth finance.

We cannot, therefore, continue to think of staple finance as economic and wealth finance as ideological, since staple and wealth finance can be used in a variety of different ways. To understand systems of finance, one must attend to the social contexts of distributions of staples and wealth. This means thinking of finance not in terms of categories (staple or wealth, economic or ideological), but as located at various points along a continuum defined by two axes: one which differentiates between staples and wealth and another which measures the convertibility and symbolic value of these goods (see Fig. 7.1). While in theory state finance can include all points within this graph, in practice individual states tend to emphasize certain types of finance and de-emphasize or even exclude others.

Staple and Wealth Finance at Pylos

The proposed wealth finance models for the Pylian political economy are in fact highly problematic. D'Altroy and Earle point out that staple finance works well "for relatively small agrarian states and for empires with highly dispersed activities that can be supported by regional mobilizations" (D'Altroy and Earle 1985, 188). The Pylian kingdom, whose territory is some 2,000 km² in extent, the size of a large Greek *polis*, clearly qualifies as a small agrarian state.³ Conversely, wealth finance is typically a strategy employed by large-scale states and empires to increase centralization (Brumfiel and Earle 1987, 4; Earle 1987, 68–69).

Moreover, there is no direct evidence for the use of craft goods as payment. For example, all the Mycenaean texts that concern bronze describe either raw metal going out of the palace to be worked into finished goods, or the receipt of finished goods into the palace (Killen 1987a). None record the allocation of these goods. Nor is there any good evidence that wealth in the Mycenaean world would have been easily convertible into staples. The textual evidence adduced to support conversion is highly ambiguous (see below). Evidence

for marketplaces, the settings where we would expect the exchange of staples and wealth to take place at the local level, continues in the Mycenaean world to be elusive (Killen 2008, 174).

Where we do have actual evidence of payment for goods and services, it is in staple goods. A good example is a text recently joined by José Melena, which records the monthly allocation of staples to individuals and groups of workers in a craft context (PY Fn 7; Text 1 in Appendix) (Melena 1998, 171–176). There is a clear hierarchy of allocations: the “wall-builders” and “sawyers” receive 1.2 liters of grain per day, while the “all-builder” receives more than twice that amount (3.2 liters per day). The grain received by the wall-builders and sawyers is the standard ration for male dependent laborers (R. Palmer 1989). Two other individuals, identified only by personal name, are also included in this text; one receives 9.6 liters of olives per day, the other 19.2 liters of olives per day, in addition to an unpreserved amount of grain (probably also 19.2 liters per day).⁴ This amount is too great to represent rations (Melena 1998, 175). It is likely that these men are supervisors of some kind associated with this architectural team and paid for their services by the state. Perhaps they provided the gangs of unskilled labor necessary to complement the skilled labor represented by the wall-builders, sawyers and the all-builder (on gang labor in Mycenaean architectural building of terraces, see Wright 1980, 82–83 and n. 74).

In another example (PY An 35; Text 2), an individual named *a-ta-ro* (perhaps *Aithalos*) is given, in exchange for alum, a large quantity of staple goods. On this text appears the transactional term *o-no*, which has the meaning of “payment” (R. Palmer 1994, 92 and n. 31; Killen 1995, 217–224). This technical term, although rarely attested, is typically used to indicate payments to individuals or groups by the palace, and is regularly associated with staple goods. For example, it also appears in connection with large sums of grain and figs allocated to a net-maker (or net-makers) and a weaver (or weavers), perhaps in exchange for their professional services (PY Un 1322; Text 3) (R. Palmer 1994, 93 n. 38; Killen 1995, 217–219). John Killen has tentatively suggested that PY Un 1322.5–6, and the similar text from Knossos (KN L 693; Text 4), represent transactions in which the palace “pays” for fine linen cloth, in the former case with foodstuffs and in the latter case with bronze, presumably raw unworked bronze (Killen 1988, 179–183; Chadwick 1964). The use of bronze as payment has been used as evidence for the wealth finance model (Halstead 1992, 71), but recent advances in our understanding of the transactional term *qe-te-o*, which means a religious fine or penalty, make it virtually certain that on KN L 693 the bronze is being paid to the palace.⁵ Chadwick plausibly suggests that the bronze is applied to a linen tunic for the purpose of making armor (cf. Homeric λινοθήρηξ, *Il.* 2.529, 830) (Ventris and Chadwick 1973, 487–488). In any case, it is striking that once again, the palace would be paying for goods and services not with finished products, as would be expected in the wealth finance model, but with staples (grain) and unworked raw materials. It is also noteworthy that payments in staples are not standardized, as rations are, suggesting that they represent *ad hoc* solutions rather than standard rates of exchange (Gregersen 1997, 398–399).

The only positive cases one can make for payment in finished goods at Pylos are animal skins and certain types of textiles, although these items’ status as wealth is far from unambiguous. Ten units of the textile designed by the ideogram *146, along with about 30 kilograms of wool, are paid to a man named *Kuprios* for delivering alum to the palace (PY Un 443; Text 5). Shelmerdine recently has argued that several other texts at Pylos record the allocation of *146 to individuals (Shelmerdine 2002). This type of textile is relatively common and domestically produced, and would hardly qualify as a “high-value” item in any meaningful sense, certainly compared to other textiles or metal goods.⁶ Indeed, the

*146 textile is produced by non-specialized domestic units and is collected by the palace as part of tax obligations from each administrative district of the kingdom; the palace receives over 500 per annum (Nosch and Perna 2001, 471). The distribution of the *146 textile therefore represents a type of staple finance, namely taxation and payment in kind.

Several texts at Pylos appear to record the allocation of animal skins to named individuals of considerable status. The text On 300 records the allocation of hides (ideogram *154) to palatial officials who are involved in the regional organization of the polity and manage local activities such as taxation on behalf of the palace.⁷ These distributions therefore could be considered payment for services rendered to the state. Likewise, the animal skins (ideogram *189) in the Qa series may have been allocated to individuals as part of a wealth finance system, but it is unclear that they were given as “payment” for services rendered. In fact, there is reason to believe that the skins were called *ke-ra-e-we* (*Igerahêwes*) from Greek γέρας, a prize or gift of honor.⁸ In Homer, the term γέρας (plural γέρα) indicates a material object that is a direct reflection of the social worth of the man to whom it is given. This is vividly illustrated by Achilles in the *Iliad* in reference to Agamemnon’s seizure of Briseis (*Il.* 1.355–356, cf. 1.161–171; author’s translation):

ἦ γάρ μ' Ἀτρεΐδης εὐρὺ κρείων Ἀγαμέμνων ἠτίμησεν· ἔλων γὰρ ἔχει γέρας, αὐτὸς ἀπούρας.

Atreides, widely ruling Agamemnon dishonored me;

for he seized and has my prize, he himself having robbed me.

Γέρα are measurable in terms of value, but not exchangeable as such, and they can therefore not be “cashed in” for staples (Donlan 1981, 101–107; I. Morris 1986, 8–9; Beidelmann 1989, 229–242; Wilson 2002, 13–70; *pace* Van Wees 1992, 218–227). Thus, the allocation of animal skins in the Qa series would be better described as symbolic exchange of non-convertible goods located between the extremes of staple and wealth (see Fig. 7.2; on animal hides as prizes in athletic competitions in Homer, see *Iliad* 22.159–160). Given that some individuals in the Qa series are identified as priests and priestesses, the purpose of these texts is probably the distribution of sacrificial hides to sanctuary personnel, as was common in the Classical period (Burkert 1985, 57; Melena 2002, 384). Sacrificial animal skins, while moderately valuable, are not manufactured, and so do not represent the production of wealth through palatially-supported craft production (Killen 2007, 117).⁹

In sum, both staples and wealth are allocated to individuals in the Linear B texts from Pylos, although only staples, and not wealth, are used as convertible payments (Fig. 7.2). Staples appear both as subsistence-level rations and as supplemental handouts at levels above subsistence for specialized labor or high-status individuals. Certain types of wealth are allocated to individuals by the palace, but they appear to be textiles and skins given to high-level elites. The palace was certainly concerned with the production of high-status goods, but there is no evidence that these goods were convertible into staples or used as payment. Rather, these items may have been non-convertible prestige goods given in a system of reciprocal gift-giving, as a way of cementing alliances with individuals and groups within the kingdom, as well as with elites from other palatial centers within and beyond the Aegean. Most of the textual evidence relates not to wealth finance, but to staple finance, to which we now turn.

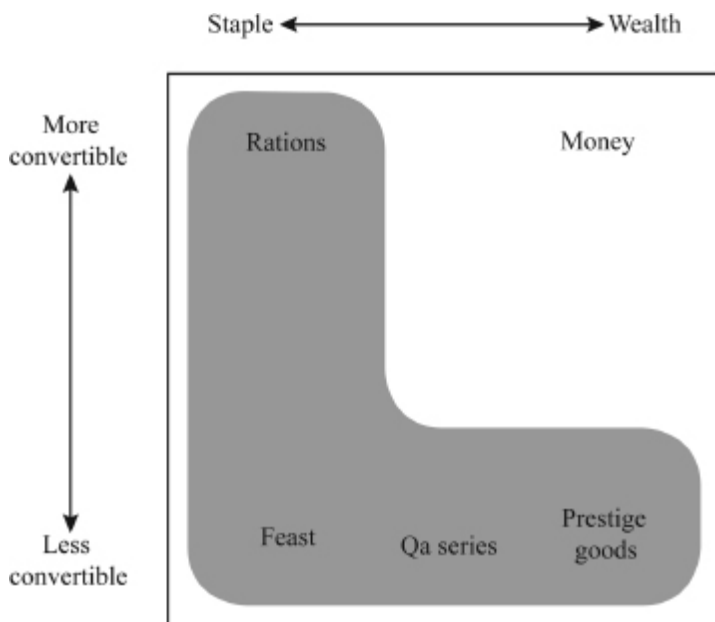


Figure 7.2. Types of staple and wealth finance, with financial arrangements used by the Pylian state shaded in gray and the Qa series indicated.

A Quantitative Evaluation of Staple Finance at Pylos

The amount of staple goods that the palace disburses to groups and individuals has not been quantified, which is surprising given the traditional emphasis that has been placed on staple redistribution in Aegean economies (exceptions are H. Morris 1986 and Halstead 2002). In quantifying the evidence for staple finance at Mycenaean Pylos, I have placed the textual data into four categories (Tables 7.1 and 7.2; for a similar scheme of categorization, see Killen 2004, especially p. 155):

- Feasting (and probable feasting): these are texts that record staple goods for a palatially-sponsored feast;
- Collection (and probable collection): these texts record the pooling of consumables together under one or more authorities. It is often clear that these materials are about to be mobilized for consumption in a feast;

	Single Feast		Daily Consumption	
	Feasting	Collection	Payment	Unknown
Certain	15,832–21,462	39,796–53,396	8,843–8,903	11,461–11,706
Probable	28,725–36,475	1,270–4,080	30,270–30,360	–
Minimum	15,832	39,796	8,843	11,461
Maximum	57,937	57,476	39,263	11,706

Table 7.1. Summary of the quantitative analysis of texts relating to staple finance (figures are rounded down). See Table 7.2 for specific texts used in this summary.

Feasting texts: Un 2, 6, 47, 718, ¹ 853	Probable feasting texts: Ua 9, 17, 25 ² Un 612, 1185
Collection texts: Cn 3, 418, 608, 1197, 1287 Un 138 ³ Wr 1325, 1327, ⁴ 1331, 1334, 1416	Probable collection texts: Cc 1283, 1284, 1286 Cr 591 Cn 868
Payment texts: An 35, 128 ⁵ Fg 368, 828 Fn 7, 41, 50, 79, 187, 324 Gn 428, 720 Ua 158 Un 1322	Probable payment texts: Cc 1285 Un 1426 Fg 253
Unknown: Fa 1195 Fn 918, 965, 966, 974, 975 Ua 434 Un 352, 1177, 1426	

Table 7.2. Texts included in quantitative analysis (see Table 7.1)

Killen 2004, 158–159 argues contrary to the common opinion (for which, see Palaima 2004) that Un 6, 718 and 853 do not record goods for consumption at large, state-sponsored feasts.

²Killen 2004, 159–160.

³This text might equally be considered a feasting text (Killen 2004, 159; Palaima 2004, 221, 223), but the immediate purpose of the record is to list goods that are currently in the possession of two individuals, collected as fines.

⁴Halstead 2002, 164.

⁵I have only recorded the grain on the verso (but not the recto) of An 128, since Ruth Palmer (1992, 483) has persuasively argued that the amount of the verso represents the equivalent in value of the amounts on the recto.

- **Payment (and probable payment):** these texts record the direct allocation of staple goods to individuals in return for goods or services rendered.¹⁰ Often these are called rations, but given the sometimes large amounts of goods allocated, payment seems a more appropriate term (R. Palmer 1989; Melena 1998, 175); and
- **Unknown:** these texts are either fragmentary, and so we cannot determine the use to which the staple goods are to be put, or the text simply gives no indication of their use.

In order to facilitate comparison and to arrive at a meaningful figure in social terms, I have converted the raw numbers into units of consumption. The staples from feasting and collection texts have been reckoned on the basis of how many individuals they could have fed at a single feast. For the staples in payment and unknown texts, on the other hand, I have calculated the number of daily rations they could have provided. In practical terms, daily consumption is calculated as double the consumption at a feast. When dealing with grain and figs, I use Mycenaean figures for daily rations given to dependent laborers by the

palace: male laborers are given 1.2 liters of barley per day, while women are given 0.64 liters of wheat and 0.64 liters of figs per day (R. Palmer 1989). For livestock, I have used estimates used by Reese *et al.* and Jameson to calculate the minimum and maximum amounts of useable meat that could be extracted per animal, and I have assumed that each feaster will have consumed half of a kilogram of meat (Reese *et al.* 1987; Jameson 1988). I have not included in my calculations several commodities that either cannot be quantified (cheeses) or are supplemental (cyperus, olives, honey and oil).¹¹ These estimates are naturally quite rough, but they provide a sense of the scale of palatial distributions, something that is not easy to understand from the raw figures. The quantities in Table 7.1 indicate the number of individual feasting portions that feasting and collection texts could have provided, and the number of individual daily rations that payment and unknown texts could have supplied.

These figures strikingly demonstrate that the Pylian state mobilized a large number of staples for consumption at large, public feasting ceremonies. Much of the material recorded in collection texts consists of livestock, which was probably mobilized for consumption in feasts (Halstead 2002, 163–169). If we lump feasting and collection texts together, we find that they represent over half of the total amount of staples recorded.¹²

The types of distributions recorded in payment texts are illuminating. There are three main types of payments: regular payments of rations to dependent labor (PY Aa, Ab and Ad series), large bulk payments to groups of laborers assembled on an *ad hoc* basis to perform specific jobs (PY Fn 7), and individual payments to named men and women who are involved in short term, *ad hoc* activities and who are compensated for their service with staples (other PY Fn texts; cf. James 2006 on the Theban evidence for staple payments). Of these types, most of the staples appear in the first category, supporting fully dependent laborers, primarily women and children involved in domestic service and textile production. Subsistence rations were assigned to these laborers on a monthly basis (R. Palmer 1989; Chadwick 1988). The text PY Fg 253 probably records a sub-total of the rations allocated to these laborers amounting to 28,905 daily rations (73.6% of the payment text total) (Chadwick 1988, 63–64). This amount represents about 60% of the total quantity of foodstuffs that would have been required to support the entire dependent labor force recorded in the Aa, Ab and Ad series (*ca.* 45,000 daily rations).¹³ Supplementing the payment total with these reconstructed figures, we reach a total of *ca.* 55,000 daily rations recorded in payment texts.

It is difficult to evaluate the contribution of these staples outside of their larger context. Minimally, 4,100 personnel are recorded in the Linear B texts from Pylos, either by name or in anonymous groups (Hiller 1988). The total population of the Pylian kingdom is most plausibly estimated at 50,000, with about 3,000 resident in the settlement of Ano Englianios (Whitelaw 2001, 63–64, whose figures are approved of by Stocker and Davis 2004, 72, n. 62). Feasting texts from Pylos therefore record enough food to feast the entire population of the polity just once. Including collection texts, which record even more material, there is enough food for 115,000 feasting portions, or 2.3 feasts per individual. Payment texts provide enough material to support *ca.* 1800 individuals for an entire month; if we lump in the foodstuffs from texts of unknown purpose, this figure rises to *ca.* 2200.

The temporal context of these documents is also crucial to determining the scale of palatial distributions. Linear B texts were temporary clay tablets baked by the fire that attended the destruction of the palace, and Mycenaean literate administration largely seems to run on annual cycles, so it seems unlikely that texts would be kept much longer than a year. Time references in the tablets seem to indicate that our texts largely represent a period

of time less than a year; Palaima concludes that one or two certain month names are preserved in the texts and two or three more possible month names (Palaima 1995, 629–631). Within this time span, many texts will have been pulped as soon as they were no longer needed. The types of texts that would be kept for a long period of time are those that give the administrators information which they need to consult periodically. The best examples of long-lived Mycenaean texts are taxation documents, where the payment due in one year is based on a formula; in such cases, the documents from the previous years may be consulted in order to calculate the amount due (Pluta 2006), particularly where payment has been deferred from one year to the next (Killen 1984b). On the other hand, texts recording staples are largely temporary texts (Halstead 1992, 71–72; 2007, 69). Payment texts either record monthly payments, or short pay periods of up to five days or so (Chadwick 1976, 118–119; Killen 2001, 439–441). Collection texts will have been pulped once the collected material was re-organized into feasts, and feasting tablets, once they had served their purpose, probably would have been quickly pulped as well. Paul Halstead has persuasively argued that texts that record payments in staples for specific services, like the exchange for alum on An 35, would have had extremely short administrative lifetimes (Halstead 2007, 69; 2002, 171). Recently, John Bennet has examined the role of cycles in Mycenaean administration, and his chart is a useful way of thinking about the life cycles of administrative texts (Fig. 7.3) (Bennet 2001). Texts that record staples are of the monthly or contingent variety. Thus, although the maximum duration for the texts included in my analysis is about one year, a more realistic estimate would be considerably shorter, perhaps a single month or even less.

What about the completeness of the textual record? There may be some overlap between texts in different categories: the texts that are classed as “unknown” may record the inventories of palatial stores, from which foodstuffs were withdrawn for feasting ceremonies. On the other hand, the textual evidence is not complete either. For example, the recently studied cattle bones found in Room 7 of the Archives Complex of the palace do not appear to have a direct textual equivalent, and their presence in the Archives Complex arguably has to do with the need, never fulfilled, to record the cattle that were sacrificed.¹⁴ Not only is it the case that the textual corpus as a whole is incomplete, so too are individual tablets, including those that are verifiably feasting, collection and payment texts. So in many ways, the figures calculated in Table 7.1 represent *minima* rather than *maxima*.

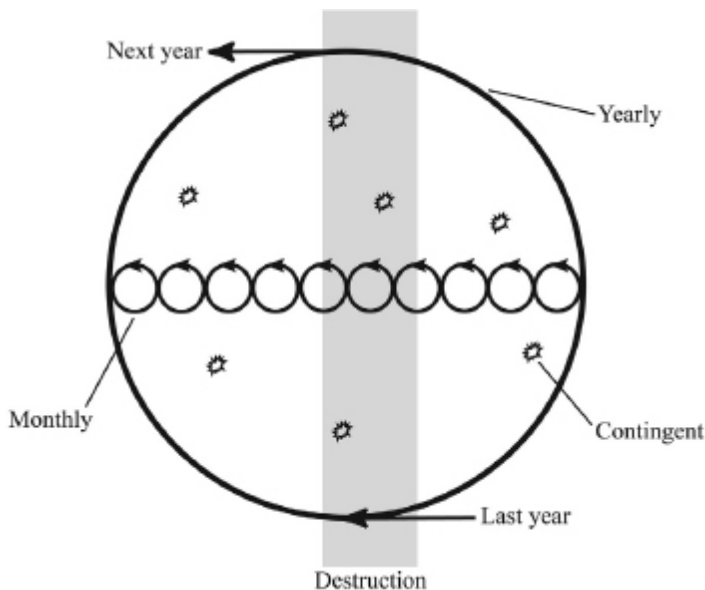


Figure 7.3. Mycenaean administrative cycles (re-drawn by author from figure provided courtesy of John Bennet).

The geographical context of these texts is also worth exploring. A number of scholars have pointed out that Pylian administration seems focused on its immediate hinterland (Halstead 1992, 72–73; Galaty and Parkinson 2007, 26; Small 2007). While the location of staple distributions cannot always be specified, it seems to be the case that most texts deal with the area near the palace at Pylos. At least three feasting texts (Un 2, Un 47 and Un 718) appear to be located near the palace.¹⁵ About two thirds of the dependent women in the Aa and Ab series are located at Pylos, and two thirds of the remaining women are located nearby (Chadwick 1988, 76). Many payment texts have no toponym recorded, which is often a sign that the location of activity is the palace and its immediate environs.¹⁶ So where we have evidence, allocation of staples seems largely concentrated in the southern half of the “Hither Province,” not very far from the palace. Ruth Palmer has shown that the palace also sends large amounts of wine to the districts of the “Hither Province,” perhaps to sponsor banqueting ceremonies outside of the palace (Vn 10 and Cn 608) (R. Palmer 1994, 75–78, 191). Thus, the foodstuffs in the surviving texts are not dispersed throughout the entire kingdom, but on a subset of it, specifically southwestern Messenia and more generally, the “Hither Province” (cf. H. Morris 1986, 110). Perhaps separate records were kept for the Further Province at its capital *Leuktron* (*re-u-ko-to-ro*). This would seem a logical solution, since staple goods are bulky and difficult to transport over long distances. Regional collection points for the storage of staples would require much less effort, and one would expect record-keeping to have gone on there as well. Indeed, the presence of inscribed sealings at Thebes labeled as going “to Thebes” (*te-qa-de*) implies the existence of literate scribes operating outside of the palatial centers (Palaima 2004, 239).

The tight contextual control over the Linear B texts allows us to consider the impact of staple finance at Pylos. Most staples are distributed to individuals at locations near the palace over a period of about a month.¹⁷ If the population of this region is about 25,000

(half of the population of the polity as a whole), then each individual in this group could have been feasted twice a month. If we include collection texts, the frequency increases to four times per month, practically once a week. The payment texts record enough food to support fully *ca.* 1800 individuals for one month, about 60% of the population of the town of Pylos. This is not as extensive as classical redistribution, but it is clear that palatial disbursements represent a substantial contribution to staple consumption within the Pylian polity.

Arguably, more important is how these goods were used. Most of the staples recorded in the Linear B tablets are not distributed in straightforward payments to craft specialists who produce symbolically charged wealth items. Rather, the majority of staples funded large feasting ceremonies, rituals which allowed the palatial authority to transform basic foodstuffs into symbolic capital. Likewise, distributions of non-staple items appear to be couched in the language of honor and prestige. Thus, both staple and wealth finance at Pylos primarily appear in contexts that render distributed goods ideological and non-convertible.

Conclusions: Pylian Finance in Context

The observations above require us to reevaluate the political economy of the Pylian state. To date, two wealth finance models have been proposed for the Mycenaean economy. Halstead's general model of the Mycenaean economy argues that staples were primarily produced and consumed near the palace and other centers. These staples largely supported craft specialists, and thereby the production of wealth items. The distribution of these valued goods is unfortunately not recorded in the extant texts, but there is little reason to doubt that finely crafted items were indeed distributed in some way. Galaty and Parkinson propose a model similar to Halstead's on the basis of the Pylian data, but while Halstead emphasizes that wealth items were fungibles which could be exchanged for staples, Galaty and Parkinson suggest that wealth finance operated primarily to create and maintain networks of support and allegiance between the elite resident in the palace and local elites whose cooperation was so crucial to the functioning of the state (Halstead 1992, 71; Galaty and Parkinson 2007, 26–27; Parkinson 2007, 97).

The evidence presented in this paper suggests that the role of staples in the support of dependent labor has been exaggerated. Most staples used as payment are dedicated to the support of fully-dependent labor involved in the production of textiles. These workers, moreover, tend to be located in and around the palace and at other major second-order administrative centers. Workers who labor under the decentralized *ta-ra-si-ja* system of production, such as bronze-smiths, do not appear to have been paid in bulky staples. Moreover, the assumption that laborers not given rations were systematically compensated with landholdings is unsubstantiated (Nakassis 2006, 290–292; *pace* Halstead 1992, 61; 2007, 70; see too R. Palmer 1999, 466). Mycenaean systems of remuneration are in fact highly complex and heterogeneous. At Pylos, where we have plentiful evidence for the nature of bronze production and the identities of the bronze-smiths, it has recently been shown that a significant number of smiths were elites, who may have voluntarily engaged in the palatial economy to increase their access to material resources and social status (Nakassis 2006, 267–319; see too Nakassis 2008). This raises the question of how centralized palatial control over certain high-value goods such as bronze actually was, if the producers were elites intimately involved in other aspects palatial economy and administration (cf. Parkinson 2007, 99–100).

While staples were used to support specialized production, more than half were not. They were instead collected and distributed in large public feasts, often associated with religious ceremonies, promoting the establishment of community under palatial auspices. This represents, from one perspective, a more direct method of securing allegiances among the community than converting these staples into wealth through the support of craft specialists. This direct approach is made possible by the relatively small size of the Pylian polity. It moreover allows the state to utilize staple surpluses without large-scale storage facilities, since incoming goods can be quickly consumed as feasts.¹⁸

The role of wealth items in the Mycenaean political economy is more difficult to discern, since, as Halstead has noted, distributions of wealth are not recorded in the extant texts. Halstead would prefer to see these items as exchangeable for staples, but there is no empirical support for this position. Payments for imported alum, for example, are made with heterogeneous combinations of staple goods, not with wealth. Animal skins, which lie between staples and wealth in the continuum of value (Fig. 7.2), are distributed to religious and administrative officials, but the available evidence suggests that these goods were conceived of as marks of honor, not fungibles.¹⁹ Thus, I would prefer to see wealth distributions, with Galaty and Parkinson, as taking place through symbolic exchanges which establish relationships of debt and dependency (Galaty and Parkinson 2007, 26).

Reciprocity and symbolic exchange are of considerable importance to understanding the Mycenaean political economy at Pylos. This is not only true for distributions of goods, but also for their mobilization. Even the language of taxation and tribute in the Mycenaean texts is based on the Greek verb *δίδωμι*.²⁰ This should not surprise us, for tribute can be presented as reciprocal gift-giving in not only the royal exchange of contemporary Near Eastern kingdoms, but also in Homer; as Liverani has shown, reciprocal and centralized exchanges of goods are cultural representations, not objective realities (Liverani 2001, especially 5–9; on tribute as gift giving in Homer, see I. Morris 1986, 4). Thus, while wealth finance is a useful heuristic concept for making sense of Mycenaean political economy, it does not do an adequate job of describing or explaining that economy, which would be better characterized as a “prestige economy.” Unlike the well-known prestige goods model, the Mycenaean economy uses both staples in feasts and non-staples in symbolic exchanges to promote solidarity and ensure allegiance (see Fig. 7.2) (on prestige goods models, see Friedman and Rowlands 1977, applied to Mycenaean Pylos by H. Morris 1986). At Mycenaean Pylos, the goal of most distributions seems aimed at the direct accumulation of symbolic profit.

Notes

¹⁸Parkinson 2007 provides a critique of using evidence from different Mycenaean polities uncritically to construct a monolithic model of the Mycenaean political economy, but see too the response of Killen 2007, 114–115.

¹⁹Convertibility between high-value wealth and staples is crucial for the “social storage” model: Halstead and O’Shea 1982, 93–94.

²⁰Earle (1994b, 445) asserts that “staple finance is typical of small-scale city states in which distance to the territorial boundaries rarely exceeds 50 km.” As the crow flies, 40 km is the furthest distance that one would have to travel to reach the palatial center from the hypothesized boundaries of the polity. D’Altroy and Earle (1985) mainly discuss the Inka and Aztec empires, in comparison to which the Pylian polity was positively puny. At its height, the Inka empire was 1 million km² in size, with a population of 8–12 million. For a recent discussion of the scale of early states, see Feinman 1998; a rough population average for early states is set at 100,000 (Feinman 1998, 108), the maximum population of the Pylian polity (see Carothers and McDonald 1979; Whitelaw 2001, 64). For an

Aegean perspective on the scale of early states (*ca.* 1500 km²) see Renfrew's concept of the Early State Module (Renfrew 1975, 1986).

¶The location of the breaks in the text make it likely that both named men were recipients of grain and olives.

¶Killen (1979, 169–170) had argued that *qe-te-o* indicated something to be paid *by* the center (*i.e.*, outgoing), and this informed his interpretation of KN L 693 (Killen 1988, 181–182). But this interpretation must be modified in light of the appearance of the plural *qe-te-a2* in the Wu nodules discovered at Thebes in 1982, which record livestock and other foodstuffs coming into the palatial center (*te-qa-de*, “to Thebes”) in the same language as taxes paid to the center (*a-pu-do-ke*, “he paid”). See Piteros *et al.* 1990, especially pp. 152–153; Killen 1994. For the most recent comprehensive discussion of *qe-te-o*, see Hutt on 1993.

¶Killen 1984a, 62 describes *146 as “cloth of relatively simple kind which could be readily produced by non-specialist labour in the villages.”

¶It is not entirely clear whether the hides (*154) on On 300 are being given to these individuals by the state or *vice versa*. The entries in the first paragraph relate to the Hither Province and are in the dative of recipient (*ko-re-te-ri*), while the entries in the second paragraph relate to the Further Province and are in the nominative (*ko-re-te*, *te-po-se-u*). L. Palmer (1963, 374) argues that “the personalities of the two provinces are treated in different ways.” Another possibility might be that the scribe shifted from the dative to the nominative of rubric, in which case the text would record the allocation of skins to officials of both Provinces.

¶Melena 2002, 380–384, based on a new fragment found by Joanne Murphy in 1995, Un 1482. The term *ῥερα* also appears in Linear B in the context of landholding, where a plot of land is described as the *ῥερα* of the priestess Eritha (PY Eb 416.1/Ep 704.2). For an alternative interpretation of *ke-ra-e-we* from *képa*, “horn,” see Killen 2002.

¶The price of sacrificial ox-hides in 4th century BC Athens was in the area of 4 to 10 drachmas, while the prices of pig, sheep and goat hides ranged from 1 to 5 drachmas (Jameson 1988, 107–112; Rosivach 1994, 62–63, 155–157). Tanned hides are obviously more valuable, although not substantially so.

¶Do not distinguish between religious and secular records; on this difference, see Killen 2001, 2004.

¶The cheeses are counted as integers; without knowing how heavy each unit of cheese was, we cannot calculate their contribution to the feast. On cyperus, see R. Palmer 1999, 470–474.

¶58% using the minimum figures, 53% using the maximum figures.

¶Chadwick 1988, 75–77, reconstructs some 750 women, 850 children of both sexes, and 275–300 men who were recorded in the Aa, Ab and Ad series. Children were given half as much in rations as adult women (Ventris and Chadwick 1973, 157; R. Palmer 1989). Thus, we would have the equivalent of *ca.* 1500 adult rations. Since these texts are monthly, the equivalent of *ca.* 45,000 daily rations would be required to support this labor.

¶Locker and Davis 2004, 73, suggest that the bones came to Room 7 as part of a process of administrative supervision. Isaakidou *et al.* 2002, 88, notice that the bones were carefully deposited, and suggest that they were placed “possibly for display to those admitted to the interior of the palace by the adjacent doorway,” although the careful deposition of the bones might also have to do with administrative convenience.

¶Un 2 is located at *pa-ki-ja-ne*, located near the palace (Killen 1987b, 170). Un 718 is located at *sa-ra-pe-da*, whose location is unknown but is perhaps in the environs of the palace, since the *wanax* and *lawagetas* have plots of land there. Outside of the immediate area of the palace, but still quite close, is Un 47, which takes place in *ro-u-so*, which is probably located near the Bay of Navarino and the modern town of Pylos (Killen 1987b, 170).

¶Ventris and Chadwick 1973, 141; Lindgren 1973, vol. I, 14. A number of texts in the Aa series without any toponym listed correspond to texts in the Ab and Ad series where the toponym is recorded as *pu-ro* (Chadwick 1988, 47).

¶Naturally, individuals who lived outside of the environs of the palace could have traveled for important feasting ceremonies.

¶The relatively small storage capacity of Mycenaean palaces generally, and Pylos specifically, has been noted (H. Morris 1986, 138–143; Parkinson 2007, 98). This lack of dedicated storage contrasts

with the large storage capacity of palaces on Crete (Christakis 2004), and the extensive storage complexes of the Inka in areas where staple finance was the principal means of support (Earle 1994b). The fact that animal skins are allocated primarily to elites may suggest that non-staples were distributed primarily to elites as markers of status, with staples being allocated to all segments of the populace through feasting.

The relevant terms include *do-so-mo*, *a-pu-do-si*, and forms of the verb διδωμι, which may also contain the prefix *a-pu-*, to which compare Greek ἀπο- (Ventris and Chadwick 1973, 533).

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Appendix. Translated Texts¹

Text 1

PY Fn 7

- .1 qa-ra₂]2 OLIV T 2
.2 pa-ka] OLIV T 1
.3 to-]ko-do-mo HORD [] Z 3 VIR 20[
.4 pi-ri-e-te-re HORD [] Z 3 VIR 5
.5 pa-te-ko-to[] HORD [] V 2 []
.6 *vacat*
.7 qa-ra₂-te , o[-pi-me-]ne[] OLIV 6
.8 pa-ka , o-pi-me-ne , [OLIV
.9 pa-te-ko-to , o-pi-me-ne [] HORD 1 []
.10 pi-ri-e-te-si , o-pi-me-ne[] HORD 1 T 4[]
.11 to-ko-do-mo , o-pi-me-ne[] HORD 7 [T] 5

[*Pallas*: BARLEY ? liters], OLIVES 19.2 liters

[*pa-ka*: BARLEY ? liters], OLIVES 9.6 liters

wall-builders: BARLEY 1.2 liters MEN 20

sawyers: BARLEY 1.2 liters MEN 5

all-builder: BARLEY 3.2 liters

To *Pallas*, per month [BARLEY?], OLIVES 576 liters

To *pa-ka*, per month [BARLEY?], OLIVES 288 liters]

To the all-builder, per month, BARLEY 96 liters

To the sawyers, per month, BARLEY 134.4+ liters²

To the wall-builders, per month, BARLEY 720 liters

Text 2

PY An 35

- .1 to-ko-do-mo , de-me-o-te
.2 pu-ro VIR 2 me-te-to-de VIR 3
.3 sa-ma-ra-de VIR 3 re-u-ko-to-ro VIR 4
.4 *vacat*
.5 a-ta-ro , tu-ru-pte-ri-ja , o-no
.6 LANA 2 CAP^f 4 *146 3 VIN 10 NI 4

Wall-builders, who are going to build:

At Pylos: MEN 2, to *me-te-to*: MEN 3

To *sa-ma-ra*: MEN 3, at Leuktron: MEN 4

Aithalos, payment for alum:

WOOL 6 kg, FEMALE GOAT 4, CLOTH 3, WINE 288 liters, FIGS 384 liters

Text 3

PY Un 1322

- .1]vest.[] GRA [qs
.2]no-[]o-no[] GRA 6 NI [qs
.3 de-ku-tu-wo-ko[]o-no GRA 2 NI 2
.4 i-te-we , o-no[] GRA 12
.5 we-a₂-no[]-no , re-po-to *146 GRA 5
.6 we-[]no , []*146 GRA 15
.7 vest.

...] WHEAT [

...] , payment: WHEAT 576 liters, FIGS [576 liters?]

To the net-maker(s), payment: WHEAT 192 liters, FIGS 192 liters

To the weaver(s), payment: WHEAT 1152 liters

Fine [linen] cloth: TEXTILE WHEAT 480 liters

[Fine linen cloth]: TEXTILE WHEAT 1440 liters

Text 4

KN L 693

- .1 ri-no / re-po-to, 'qe-te-o' ki-to , AES M 1 [
.2 sa-pa P 2 Q 1 e-pi-ki-to-ni-ja AES M 1]

Fine linen, a religious penalty, a *chiton*, **BRONZE** 1 kg

sa-pa3 [BRONZE] 45 g over-shirt(s) BRONZE 1 kg

Text 5

PY Un 443

- .1 ku-pi-ri-jo , tu-ru-pte-ri-ja , o-no LANA 10 *146 10
.2 po-re-no-zo-te-ri-ja LANA 3
.3]do-ke , ka-pa-ti-ja , HORD 2 te-ri-ja GRA 1 LANA 5

Kuprios, payment for alum: WOOL 30 kg, CLOTH 10

The *po-re-no-zo-te-ri-ja*:4 WOOL 9 kg

[Karpathia gave: BARLEY 192 liters; Telias [gave]: WHEAT 96 liters, WOOL 15 kg

Notes

- | | |
|---|---|
| 1 | In this paper, I translate the Linear B ideogram HORD as barley and GRA as wheat; but see the persuasive arguments of R. Palmer 1992, who suggests that the values be reversed. |
| 2 | Based on the figures preserved in the first paragraph, this figure can be reconstructed as |

180 liters.

3 Probably the name of a garment (Ventriss and Chadwick 1973, 320-321).

4 Probably the name of a festival, a compound word whose second element is -ζωστήρια, from ζώστης, “belt, girdle” (Palaima 1998, 306-307).

SEAFARING IN THE BRONZE AGE AEGEAN: EVIDENCE AND SPECULATION

Cheryl A. Ward

Introduction

Recent studies focused on maritime migration, the exchange of material goods, and the effect of seafaring have brought together much of the archaeological evidence for trade and travel among the islands of the Aegean and on the mainland (Cline 1994; Manning and Hulin 2005, for example). Most evidence used to track human movement is indirect as the remains of ancient watercraft are both scarce and relatively late (*ca.* 1300 BC and later) in the Mediterranean. Island occupation, mainland and island harbors, introduction of non-local species and materials, and representations of boats and ships are the primary means available to learn about how people used the sea to facilitate contact and exchange. In this paper, I review the current state of inquiry into the capability, scale, and intensity of long distance trade in the Bronze Age Aegean, specifically during the Bronze Age for the Minoan and Mycenaean culture groups from the perspective of seafaring by other cultures, particularly Egypt.

Prehistoric Maritime Activity and Watercraft

As Broodbank convincingly argues, little evidence exists for exploitation of islands until the end of the Upper Palaeolithic when increasing use of coastal resources and a few sites on islands in the western Mediterranean reflect familiarity with the sea and hint at the potential for seagoing, that is, limited crossings with marginal impacts (Broodbank 2006). It is not until the later 11th millennium that evidence for repeated journeys to Cyprus and Melos by Mesolithic foragers implies seafaring, targeted and regular travel by boat over distances of 25 km or greater (Broodbank 2006, 208–209). By the early eighth millennium, small groups of farming colonists brought plants, animals including cattle, and families by sea both to islands and peninsulas in the Aegean and began moving further west (Perlès 2003). Planned long distance travel was repeated, complex, and long term.

Our evolving understanding of early maritime travel does not include direct knowledge of the means of seafaring, but physical evidence from China (Jiang and Liu 2005), Africa (Breunig 1996), Europe (McGrail 2001, 173–174), the Persian Gulf (Cleuziou and Tosi 1994; Lawler 2002; Carter 2006), and the southeastern United States (Wheeler *et al.* 2003) shows that on a global scale, both foragers and farmers used logboats (large canoes constructed of single logs) and floats (bundled buoyant stems of reeds or grasses) regularly by the sixth millennium. Experiments and ethnographic attestations of reed floats and logboats demonstrate the abilities of such craft to make journeys of the requisite distance indicated by archaeological finds on or from islands. Still, maritime travel on a small scale seems most prevalent until the late fourth or early third millennium in most areas.

Even quite shallow and simple watercraft are capable of sea voyages in good conditions. Ethnographically attested reed boats in Greece called papyrella resemble iconographic

representations of floats from the early Aegean, and recent experimental archaeology showed that a crew of fewer than four men could power a 6 m-long, 50–150 kg cargo capacity reed boat about 20 km per day (Broodbank 2000, 100–102). The discovery of a mid-sixth millennium BC logboat in excavations at Marmotta, Lake Bracciano, Italy, prompted a Czech archaeologist to create a replica of the 10.5-meterlong boat and a second design based on additional evidence (Tichý 2001a, 2001b).

About a meter wide and 50 cm deep, the replica was sturdy enough to carry 12 people, 100 kg of obsidian, and supplies on an 800-km route in the Mediterranean. The crew used only paddles, and easily achieved about 3 knots (*ca.* 4 km/hour), with a typical journey of 30–50 km each day. The greatest difficulties encountered were with beaching the hull in active seas, but the team simply waited for calmer weather. The addition of a small sail did not significantly affect performance. The waves encountered reached two meters in height, and wind speeds of 7–9 on the Beaufort scale were recorded.

It is probable that simple craft such as these carried the maritime farmers of the Neolithic and some adventurous Mesolithic foragers traveling to Melos for obsidian, the major marker for travel and trade until the mid to late fourth millennium. A change – environmental or technological, social or demographic – subsequently permitted and prompted the colonization of a number of small islands, perhaps earlier considered marginal, and a preoccupation with the maritime environment that is increasingly visible in the archaeological record.

Settlement and Sea Travel

Terrestrial archaeological surveys on Crete show that even the location of Final Neolithic smallholdings demonstrates an engagement with the sea (Hayden 2003), although we do not know if sites were placed along promontories and coastal ridges to be wary or welcoming to maritime traffic. Contact with the Cyclades is evident through pottery on Crete and other islands, and there is evidence for rapid expansion of EB Minoan cultural traits into the islands, though there is no dominance or displacement visible in the few sites where sufficient excavation has occurred.

Broodbank's detailed investigation of the settlement of the Cyclades (Broodbank 2000) sets the stage for considering virgin Aegean colonization by Final Neolithic/Early Bronze Age peoples able to exploit arable land, metallurgical and other geological deposits such as copper, lead, silver, andesite and marble, and to capitalize on their ability to move between islands in logboats/canoes powered by relatively large crews. Broodbank's evaluation of mortuary and settlement data within a geographic framework suggests that the more connections an island had to other islands, the greater its prominence, at least in the archaeological landscape, in terms of size, ability to disperse its production regionally, and ability to bury wealth in the ground in the form of objects requiring specialist skills and materials of limited distribution.

This is the status quo even at the sites most frequently considered as Minoan colonies in the MB period, where limited numbers of stone vessels and ceramic finds show increased contact that expands in LM I when Minoan pan weights, pottery, painting styles and Linear A script among other features are recorded from sites such as Phylakopi on Melos, Ayia Irini on Keos, and Akrotiri on Thera. Despite the heavily Minoanized nature of material culture at these sites, there is no cultural break and the sites remain strongly Cycladic. Kythera, however, shows a substantial adoption of Minoan traits between EMII and LM I and is interpreted as a colony with substantial Minoan overlay (Broodbank and Kiriati

2007). Other sites proposed as Minoan colonies (especially Trianda and Ialyasos on Rhodes) have almost no architectural exposure and such identifications are inadequately supported by the presence of Aegean ceramics. Minoan contact and trade are undoubted, but we lack the most basic data to determine whether this contact and exchange were direct or indirect.

As other authors in this volume demonstrate, there is no unified portrait of a Protopalatial Minoan elite, and there is no unilinear development of the palace as a structure both corporeal and imagined. Yet during the Middle Minoan period (MM Ib *ca.* 1900/1850–1750/1720), a concentration of “capital” in limited social segments existed and was used to demonstrate status through architecture, the adoption of new fashions in applied arts, and the expansion of religious ostentation along with expanded production workshops, wider exchange networks and fortification walls.

Most explanations for this process rely on the idea that agricultural produce was sufficient to support surplus accumulation. In many areas, social and economic networks are built up through such exchange. Non-Aegean examples such as the reciprocal exchange of mounds of yams transported by canoes between islands off Papuan New Guinea (Munn 1986) or the role of maritime transport by planked canoe in Chumash society (Arnold 1995) provide both archaeological and ethnographic evidence of multiple channels of small-scale exchange over long distances with concomitant emphasis on the enhancement of socio-economic ties. In the past, many authors have assumed that cargos of relatively low value, including agricultural produce, required large ships to transport sufficient quantities to make the effort worthwhile. Recent excavations of the Pabuç Burnu (6th century BC) and Tektaş Burnu (*ca.* 425 BC) shipwrecks by the Institute of Nautical Archaeology near Bodrum, Turkey, illustrate the opposite concept, however. These small ships moved small amounts of bulk cargos within a regional setting (Greene 2005; Carlson 2003) at the same time other ships carried far greater and more diverse loads (Hadjidaki 1997).

It is probable that Early Bronze Aegean trade likewise occurred on a variety of scales, from connecting settlements on a single island to journeys requiring several days at sea by people in a single canoe. Agricultural products (wine, wool textiles, olive oil) are often identified as likely trade goods for the EBA and MBA, as are commodities such as timber. Organic products including timber frequently disappear in the archaeological record without textual documentation, yet often are offered up as likely exchange materials carried in Aegean ships.

Other shipborne cargoes also disappear through processes of recycling and reuse. Downey’s reanalysis of bronze tool types within the context of tool function, architectural data, and specialized woodworkers mentioned in the Pylos Linear B tablets leads her to conclude that the acquisition of metal tools for woodworking in EB II was a significant motivation for increased cultural contact within the Aegean and in local economies throughout the Bronze Age (Downey 2001).

Like woodworking tools, timber was likely traded within the Aegean, but like the Aegean tools, probably not beyond its boundaries, primarily because Cyprus, the southern coast of Turkey, and the northern Levant had long been major timber sources both locally and regionally. Crete’s active export of timber is not established until more than a millennium later. The oft-cited bronze two-man saws from LBA Knossos, and sawyers mentioned in LH IIIB Linear B tablets, constitute evidence for wood supplies and woodworking, but all indicate exploitation of local wood supplies, not external activity, in the Bronze Age. In contrast, the sole textual reference cited as evidence of timber as Aegean export is a brief mention of *Keftiu* ships in a Levantine harbor claimed by Tuthmosis III

(mid-15th century BC).

Putting aside arguments about the identification of Keftiu, the term “Keftiu ship” is ambiguous, creating the same dilemma presented by much later 7th century AD Abbasid references to “China ships.” Even for that period, with textual and artifact-based evidence available to present-day researchers, it is unclear whether authors used the term to describe ships carrying goods that originated in China, ships that went to China directly, or Chinese ships that sailed from China to the head of the Persian Gulf. A similar category of Byblos (*kbnt*) ships exists in Bronze Age Egyptian texts and is interpreted to mean ships active in the Byblos trade, ships from Byblos, and also ships built of cedar acquired through the Byblos trade. To build an Aegean export trade in timber upon similar ambiguity is unnecessarily speculative.

Timber exported from the Levant supplied the seafarers for which we have most evidence, the Egyptians, from the mid-third millennium if not earlier. For at least half a thousand years before that, Egypt’s international contacts ranged from the southern end of the Red Sea to northern Syria and the Levantine coast. Its centralized government and efficient system of administration are better understood than the Aegean administrative process, but even in Egypt, we do not have a comprehensive view of the range of international exchange. For example, scholars still strongly dispute each other’s interpretations of the location of Punt, or God’s Land, the source of frankincense, ivory, and other rare materials, and definition of the material goods the Egyptians brought with them to trade in 2500 or 1500 BC is lacking despite representational and physical evidence of such trips (*e.g.*, Kitchen 2004; Meeks 2003).

Indirect Evidence

Indirect evidence of shipping in the Aegean consists of non-local items found on islands, images of ships and ship models, textual references to maritime affairs and exchange, anchors, and coastal towns with harbor or anchorage capability or facilities. In addition, many scholars of Aegean prehistory have looked to Egyptian evidence to evaluate the potential for seafaring within the Aegean, including how schematic images of ships and boats should be interpreted.

Egypt also is brought into discussions of long distance trade in ways that have tended to emphasize Aegean participation in Near Eastern networks. For example, the Aegeanist interpretation of the 18th Dynasty inscription of Aegean place names on a statue base of Amenhotep III at Kom el-Hetan as an itinerary for a royal Egyptian visit is less convincing than the Egyptological perspective that the list is part of a broader “world atlas” of known, but somewhat marginal, entities (Kitchen 1966; Cline 1994). Other efforts to make sense of individuals who seem to represent different ethnicities bringing goods to pharaoh in five primary tombs of Egyptian officials also draw divergent opinions.

Over the years since these caricatures first were evaluated and identified as Minoans and Mycenaean, further study has resulted in repeated qualifications, explanations and excuses by scholars for discrepancies as mistakes by artists or reliance upon copybooks. These quibbles are serious enough to call into question the identification of some of these individuals as Aegean. Whatever their identity, the foreign individuals in question are of significantly lesser status and rank than the Egyptian officials and so are unlikely to be participating in royal exchange as described in the Amarna tablets.

The geographical distribution of Aegean pottery is extensive. Continuing work at sites such as Tell el Daba’a and the early 12th Dynasty site at ‘Ezbet Rushdi has recently

provided new data related to the introduction of Middle Bronze Levantine and Middle Minoan ceramics to Egypt (Marcus 2007, 160). Yet, as a number of authors have shown, archaeological excavations in Egypt and the Near East produce only a few Aegean objects per decade until the later 18th Dynasty in Egypt when a large deposit at Amarna of LH IIIB wares is typical of the bump in numbers for this period.

A striking example of archaeological and textual evidence is offered by a study of 18th Dynasty supply of military outposts in the Levant by individuals who were also allowed to bring along items for private trade. Bergoffen suggested that such small-scale trade accounts for the distribution of much of the Late Cypriot pottery in the north Sinai and Egypt, especially during the time of Tuthmosis III, and comments that the LC pottery was neither hoarded nor of particularly high value there or in southern Canaan (Bergoffen 1991, 62 and 71–72).

While the presence of foreign wares is interpreted as a signal for elevation of an individual's social status in the Aegean, it is worth noting that most Aegean wares in Egypt are found in contexts indicative of moderate rather than high status. Even when Kamarese ware, considered to be the finest of Minoan fine wares, is found, it is recorded not in the palaces and tombs of kings but more often in the burials of artisans and mid-level managers of the late Middle Kingdom in Egypt (*ca.* 19th century BC). It is difficult to see Egypt as a direct recipient or trading partner of Aegean ceramics then or later when evaluating, for example, the absence of significant deposits of Minoan pottery at sites like Tell el Daba'a.

Egyptian shipping in the Early and Middle Bronze Age exceeded that of the Aegean in scale and scope, with evidence for long-distance seafaring and exchange provided by non-local materials such as cedar and frankincense present in late Predynastic and early Dynastic sites. By *ca.* 2500 BC, Sahure recorded voyages to Punt that resulted in frankincense trees planted in his palace gardens, and even before his reign, the Egyptians had learned to acquire significant timber supplies from Lebanon. The construction of the *ca.* 2550 BC, 43-meter-long Khufu ship required more than 12 tons of cedar, with the shortest plank 7 m long and 12 cm thick (Lipke 1984; Ward 2006).

Ship size offers a way to look at the scale of seafaring. Analysis of an early 12th Dynasty inscription at Mit Rahina by E. Marcus identifies it as a cargo manifest or bill of lading for ships involved with maritime transport of booty, including copper, timber and slaves, from the Levant to Egypt (Marcus 2007). He concludes that at a minimum, the ships involved had a capacity of 26–30 tons, about 30–50 percent greater than Monroe's recent calculation of LBA ship capacity (Marcus 2007, 156; Monroe 2007). Simply comparing the amount of cedar required to build the ceremonial, yet functional, Khufu ship and the 1250-year-younger Uluburun ship as it was reconstructed offers a similar perspective. Although scholars have often dismissed Egyptian river craft as irrelevant to understanding seafaring, Boston University/University of Naples excavations at the anchorage of Gawasis on the Red Sea confirm similar technology used to support seafaring in cedar ships for the Middle and New Kingdoms, in ships with planks up to 22.5 cm thick. The excavations, directed by Kathryn Bard and Rodolfo Fattovich (2007), have exposed what is essentially a staging area for large expeditionary forces.

Maritime Egyptian links to the Aegean also are reflected in standing rigging and proportions of square sails on ceremonial vessels in the narrative-style wall paintings from LM I Thera (the extensive interpretation and study of this scene is summarized by Basch 1987 and Wedde 2000). The nature of the transmission of information about sailing gear is unclear, but the interaction is unmistakable. Similarities drawn between these hull profiles and those seen in the iconography of seals, models, and other images that extend into the

very late Bronze Age affirm a maritime scope of activities, yet little direct evidence of seafaring exists.

In Egypt, the discovery of the Amarna tablets, some of which were made from Cypriot clays (Goren *et al.* 2003), permitted a view of military forces and suppliers like those active in the Levant as noted above in addition to discussions of trade and exchange at the highest social levels. Finds of exotic goods at Aegean sites often are interpreted through the Amarna lens, even though the tablets deal almost exclusively with Levantine and Near Eastern provinces, small states, and cities. Problems with using these tablets to look at Aegean questions again center on the paucity of Aegean artifacts in Egypt; for example, there are no Aegean artifacts in the palaces of Amenhotep III.

Cline, followed by Pulak (Cline 1994; Pulak 1999), considers exchange at the highest social levels to be the standard of trade for the Aegean orientalia carried aboard the Uluburun shipwreck (1300 BC) rather than more mundane bartering and exchange for the materials and objects of day-to-day life as illustrated by the Cape Gelidonya shipwreck (1200 BC). Both postulate an Aegean destination for the Uluburun cargo, one of the most important archaeological assemblages for addressing questions of contact and exchange in the LBA Aegean.

Direct Evidence of Seafaring: Shipwrecks in the Mediterranean and Aegean

Only three Bronze Age shipwrecks have been located and excavated, although concentrated artifact deposits at other sites are likely to represent cargo from small vessels. All three shipwrecks date to LH IIIB or slightly later, but only the Point Iria wreck is in the Aegean proper. The Gelidonya and Uluburun sites are on Turkey's southern coast and are likely of Cypriot and Syrian origin, respectively, according to analysis of hull wood species (*Cedrus libani*) and personal possessions of the crew.

The spectacularly preserved artifacts from the ca. 1300 BC Uluburun shipwreck make up perhaps the best-known and largest assemblage of evidence for LBA trade. Detailed studies of its ship and its contents by project director Cemal Pulak and archaeologists Jeremy Rutter, Nicolle Hirschfeld, and graduate students at Texas A&M University and other institutions provide extensive catalogs and analysis of the more than 15,000 artifacts (and 85,000 faience, glass and stone beads) excavated between 1984 and 1994 by the Institute of Nautical Archaeology and curated in the Bodrum Museum of Underwater Archaeology.

Nine or perhaps ten cultures are represented by finds on the wreck, and Pulak suggests it was probably loaded, and perhaps chartered, for its final journey at Ugarit or a north Cyprus port with a heavily Cypriot cargo of copper and relatively poorly made pottery (Pulak 1998, 216–218). The cedar ship, about 15 m long with a capacity of about 20 tons of cargo and ship stores, carried 24 stone anchors (three tons total weight) of a type found most frequently at Levantine sites including Minet al Beidha, Tell Nami, Ugarit, Tell Abu Hawam, Byblos and Cyprus.

The Uluburun ship's cargo included raw materials and finished products of both elephant and hippopotamus ivory, silver jewelry, ingots, and bullion; gold jewelry and bullion; ten tons of copper, a ton of tin, colored glass transported as ingots, as well as aromatic terebinth resin, amber, tortoise carapaces, and ostrich eggs, all identifiable as high status goods because of their presence in the administrative centers, elite residences, and elaborate graves of a relatively small portion of ancient eastern Mediterranean cultures. In addition, a pithos of pomegranates (Ward 2003), several stuffed with poor quality Cypriot

pottery, and another that probably carried wine; cosmetic containers of ivory, weapons, and tools, including a set of Aegean woodworking chisels, were on board (Pulak 1998, 1999, 2001).

Pulak, who co-directed and later assumed full responsibility for the site and its publication, tentatively identifies the Uluburun ship as Syrian in origin with a Syrian crew and places its sinking at the end of the fourteenth century, towards the close of the 18th Dynasty in Egypt (Pulak 1998, 216–218). Because the ship's cargo consists of large amounts of raw materials such as four-handled copper ingots that other excavations show were converted to finished products in Aegean palace workshops, he views the cargo as an example of royal gift exchange (Pulak 1998, 215).

The occurrence and intensity of seaborne traffic during the most active trading period (*ca.* 1400–1200 BC) as identified by numbers of non-local artifacts and materials in Aegean sites (Parkinson, this volume; Cline 1994; Manning and Hulin 2005), frequently is examined through the idiosyncratic textual record of the Amarna tablets or economic tablets from slightly later in the 13th century at Ugarit. The Uluburun ship seems to exemplify directional trade by the most conspicuous consumers in Late Bronze Age societies, whose efforts to acquire high-status goods seem to be particularly important in the development of intensified levels of production and the extension of political and economic influence, but definitive proof of who operated the ship, how the ship's cargo was financed, or where it was going is tenuous at best.

Most recently, Pulak has identified the Greek mainland as the ship's ultimate destination, in part because he argues, as further defined in Bachhuber, that items on the ship of Mycenaean Greek provenance should be linked to two Aegean individuals serving as "officials" or "envoys." A third individual associated with them is described as a likely Balkan mercenary (Pulak 2005, 2001; Bachhuber 2006, 2003). That only one of 150 balance pan weights is Aegean suggests to Pulak that because the Mycenaeans were involved in gift exchange, they did not need weights, an explanation requiring an optimism about human nature rarely demonstrated in, for example, the Amarna tablets.

The proposition that the ship was headed to a Greek mainland site, where for example, all the bronze dispersed by the palace at Pylos in a year's time totaled less than a ton (Nakassis 2006, 275–276), as an example of royal exchange requires a major redistribution at a single site or multiple stops that would reward the ship's operators. In contrast, Nakassis' analysis of the LH IIIB Linear B tablets at Pylos favors close networks of individuals in social and economic networks over redistribution or Near Eastern models of administration (this volume). The networks were populated by elites who were also producers, even if on a household scale, and by entrepreneurial contractors ("collectors") who helped the palace acquire resources far beyond those available to individuals as a way of gaining social prestige and material culture for display (Nakassis 2006, especially 6, 48, 51, 79).

Another question is whether the Near Eastern suppliers of "gift s" would find Aegean products such as textiles, perfumes, or Baltic amber sufficiently valuable as return gifts. Baltic amber occurs relatively frequently in elite Aegean contexts but is rare in Bronze Age Egypt and the Near East. The few exceptions include uncharacterized beads and jewelry from the tomb of Tutankhamun and a small amber lion in a *ca.* 1340 BC royal tomb at Qatna with Baltic origins as a raw material and local Syrian styling (Mukherjee *et al.* 2008). Because the Uluburun ship seems to be on a westward heading, Pulak has linked the amber beads found at the site to Aegeans acting as envoys.

Another unusual aspect of the Uluburun site is the relatively small number of weapons

recovered. Spears, arrows, swords and daggers exist, but in numbers far smaller than those carried on comparably sized vessels of later date, and only six persons are conceived of as traveling on the ship, including the two elite “envoys” and four crew, including a captain. In my opinion, it is unlikely that a single ship with a cargo of this nature was sailed and protected by only four individuals with few spare spears. Did other ships sail with the Uluburun vessel to support and protect it? Was it alone, lost, or fleeing pirates or other naval conflict?

Its story is complex and perhaps unknowable, but the intensive study of the site and its contents by Pulak and colleagues permits reasoned speculation that focuses on major questions about the organization of seafaring beyond the eastern limits of the Aegean. Bachhuber offers a salient comment on the ship’s final voyage when he notes that while it is not possible to overcome the limitations of material culture to define the purpose of the voyage or passengers, the ship operated within elite contexts of the Aegean and incorporated both palace-oriented and more ordinary cargoes (Bachhuber 2006, 359).

Excavated under the direction of George Bass in 1960 and further studied in 1994, the Late Bronze Age Cape Gelidonya shipwreck, *ca.* 1200 BC, also made a lasting impact on Aegean prehistory (Bass 1967; Pulak and Rogers 1994). About 100 km east of the Uluburun peninsula, its cargo of four-handled copper ingots, the remains of degraded tin ingots, and broken bronze tools for recycling, along with functional tools for copper smithing, confronted archaeologists with direct evidence of entrepreneurial cabotage by people with strong cultural ties to Cyprus.

Bass has repeatedly pointed out that he views this ship as a counterpoint to the then-prevalent view of a Minoan or Mycenaean thalassocracy controlling the seas and trade (Bass 1997). Although more metal ingots were found at this single site than were then known from the entire Aegean, only a few artifacts could be directly linked to Cyprus or the Aegean. Notably, two coarseware LH IIIB2 stirrup jars, a Cypriot-type anchor, and the base of a large storage jar that may also be Cypriot were recovered in 1988 and 1994. Personal items and those showing shipboard use, such as lamps, were Syro-Palestinian in origin.

The final Late Bronze Age shipwreck, excavated by Greek archaeologists at Point Iria in the Gulf of Argos (Phelps *et al.* 1999), carried a small cargo of ceramics of mixed size and cultural origin dated to about 1200 BC. Eight coarse fabric LM IIIB2 stirrup jars, four LCIIIC pithoi, and nine LH IIIB2 containers, including three two-handled large jars, were represented, along with a single cooking pot, and a possibly intrusive small stone anchor. No traces of the ship’s tools, weapons, personal goods, or other hints at the type, size or origin of the craft, its operators, or commissioners of the cargo were recovered, and only a few scraps of wood remained. Despite the rather detailed hypotheses offered by the site excavators about the route, construction, and operation of the vessel, there is little support for such assumptions from material culture remaining at the site.

The mix of Cretan, Cypriot, and Mycenaean clays and styles from the Point Iria site may represent internal Aegean trading networks, but it is unlikely that a single ship went to each location to acquire the ceramics directly. Instead, the Point Iria assemblage is likely to represent the cargo of a small, open boat, not unlike a small modern caique, taking on merchandise at a central location and then traveling within a close-knit network of settlements along the coast. In this scenario, the site recalls the LM I Şeytan Deresi assemblage of pottery from southern Turkey (Bass 1976; Margariti 1997, 1998) or the Bon Porté boat of *ca.* 525 BC from southwestern France with its small mixed cargo of East Greek and Etruscan pottery along with the remains of sewn planks, keel and frames of relatively small dimensions (Pomey 1981) rather than the Gelidonya ship with its copper-

smithing kit, metal cargo, galley goods and personal items.

Conclusion

Each of these LBA ships carried a mixed cargo and small crew, and traveled routes – or at least wrecked – within sight of land. In one sense, it is the many coastal anchorages and maritime towns of the Aegean that offer some of the strongest evidence for seafaring there. Although we lack significant material evidence for ship types and the scale of shipping, the growth of sites along Aegean shores and the impact of Mycenaean administrative practices (see Tartaron this volume) attest to a vibrant and expansive milieu in the Late Bronze Age. Continued maritime archaeological survey in the Aegean remains the best source for direct evidence of its seafaring heritage, while terrestrial survey and excavation at coastal sites provide critical information about the nature and scale of Aegean shipping.

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BETWEEN AND BEYOND: POLITICAL ECONOMY IN NON-PALATIAL MYCENAEAN WORLDS

Thomas F. Tartaron

Introduction

The emergence of the palace-centered state is the most striking political development of the Late Bronze Age on the Greek mainland (Figs. 9.1 and 9.2). Yet in spite of the impression of pervasive political presence that is engendered by our scholarly focus on the palaces, many areas, even in the so-called Mycenaean heartland, were not integrated politically into any palace. This is in part an assertion from negative evidence; that is, in many regions we have been unable through a century or more of excavation and survey to locate a palatial-looking center. In recent decades, this negative impression has been reinforced by the lack of evidence in some regional surveys for hierarchical patterns in settlement and burial as might be expected from a palatial system. There is also *positive* evidence for regionalism or localism, as suggested for example by stylistic and archaeometric studies of potting traditions. There is a certain convergence in Mountjoy's monumental study of regional Mycenaean painted pottery and the archaeometric analyses of the Bonn group, around the point that to a much greater extent than previously believed, pottery production was local, and emulation of shapes and decoration was more common than importation (Mountjoy 1999; Mommsen, Beier, and Hein 2002; Hein, Tsokalidou, and Mommsen 2002). Thus, the variability exhibited in the Mycenaean world should be just as striking and informative as the normative properties of the "Mycenaean koiné," or the admittedly intriguing similarities among the palace centers in institutions or scribal language.

In this paper, I am not primarily concerned with the actual political and economic workings of the palaces, some of which are considered in this volume by others. Instead, my main aim is to explore the potential to illuminate by archaeological means the process of palatial expansion and the limits of political and economic integration of surrounding territories. I will examine three sub-regions within the Corinthia: the southwestern Corinthia, the northeastern Corinthia, also known as the Isthmus, and the Saronic Gulf coast of the southeastern Corinthia (Fig. 9.3). Each of these sub-regions followed a different trajectory in its engagement with Mycenae and the Argolid between the end of the Middle Helladic period and the mature palace phases of LH IIIA2 and later. From the perspective of the hinterland, I hope to follow the diachronic process as these polities responded to palatial expansion and ultimately were either incorporated into the state or remained outside Mycenae's political orbit.



Figure 9.1. Satellite image of the Aegean area showing regions of the mainland and islands.

To begin, it may be useful to think in terms of a series of spatial scales for which we can query political structure and integration (Table 9.1). We need to consider political integration at each of these scales in order to have a fuller understanding of how Mycenaean states worked. I will focus mainly at the scale of *region*, where we immediately confront problems of variability and wide margins of uncertainty. About some regions, such as that controlled by Thebes, we know very little. The two regions about which we know the most, Messenia and the Argolid, both exhibit high political integration, but the nature of that integration appears to be very different. Interpretation of the Linear B archives has yielded a good sense of the territory controlled by Pylos and the nature of the Pylian political economy in late Mycenaean times. Pylos emerged gradually as the leading polity in Messenia among several rivals, but once it did it held undisputed control of a realm of over 2000 km² (Bennet 1998, 2007; Bennet and Shelmerdine 2001). By contrast, although Mycenae rose meteorically in the Shaft Grave period and was never really rivaled in material terms (Voutsaki 1995, 1998, 2001), in the Argolid alone there is another palace center and a handful of strongly fortified citadels. Because we possess no comparable archive, it is exceedingly difficult to sort out the political situation in the Argolid, let alone address the incorporation of more distant territories (but see Voutsaki this volume). The complexities of the Argolid underscore the fact that although the tablets provide our most comprehensive glimpse at the workings of a Mycenaean state, the Pylos model cannot be applied uncritically to the political dynamics of other palace states.



Figure 9.2. Map of the Aegean area showing the locations of prominent Bronze Age settlements.

Intra-site	political organization within and constituting the palace center itself, often delimited by fortification walls though not in all cases
Adjacent (near) hinterland	"lower town" and surrounding countryside with villages, fields, and pastures that formed a primary area of economic exploitation to support the center
Region (far hinterland)	delimited politically by the maximum geographic extent of political control of a single state, whether direct or indirect
Mycenaean "heartland"	area of shared culture in which several Mycenaean states existed and presumably interacted
Periphery	areas outside the heartland with which Mycenaean had frequent or sporadic contacts

Table 9.1. Spatial scales of analysis for Mycenaean political integration.

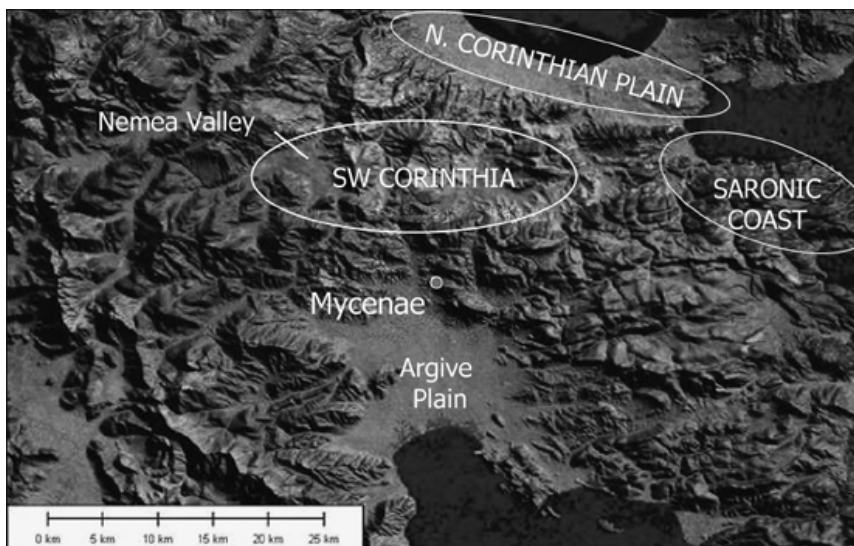


Figure 9.3. The northeastern Peloponnese, showing the three sub-regions of the Corinthia addressed in the text.

Yet where the archival information is insufficient or lacking, archaeological evidence can help us find the spatial limits of political integration, distinguish political control from cultural influence, and elucidate the diachronic and interactive aspects of palatial expansion. To demonstrate the possibilities, I turn now to a consideration of the three above-named sub-regions of the Corinthia.

The Southwestern Corinthia

For the present analysis, the southwestern Corinthia is significant because of its productive potential and accessibility from Mycenae, and because it is both geographically and archaeologically distinct from the coastal and northern Corinthia (Fig. 9.3). The evidence from excavations at Zygouries and especially Tsoungiza in the Nemea Valley, as well as survey data from the Nemea Valley Archaeological Project (NVAP), shed light on the process of Mycenaean expansion (Wright *et al.* 1990). This particular area suffered the so-called Middle Helladic hiatus, a virtually complete depopulation from the end of EH III to MH III, a period of three to four centuries (Wright *et al.* 1990, 640–645). In MH III, resettlement occurred at Tsoungiza as indicated by sherds though not architectural remains, and elsewhere in the Nemea Valley surface sites of the same or slightly later date (LH I) have been detected. Cherry and Davis present several arguments that Mycenae itself may have been closely involved in the resettlement: the chronological coincidence with the emergence of Mycenae in the Shaft Grave era, the fact that tholos tombs were never built in the Nemea Valley or the entire Corinthia in the competitive 15th century, and the theoretical argument that Mycenae needed to control the surplus of additional cultivated land in order to finance and consolidate its position (Cherry and Davis 2001, 148–156).¹ They point out that it would have been relatively easy for Mycenae to settle and exploit such vacant landscapes. But other evidence, particularly the pottery, indicates a strong measure of independence in the early Mycenaean period (Rutter 1989, 1990, 1993; Wright 2004, 124–

126; Morgan 1999, 358–361; Mountjoy 1999, 197). Rutter has observed that the pottery used by the first group to resettle Tsoungiza finds close parallels not in the Argolid but in late MH graves in the North Cemetery at Corinth (Rutter 1990, 452–455). The MH III assemblage is parochial, with a few imports from Aigina, but only general stylistic links with the Argolid and the Corinthia (Morgan 1999, 360). In LH I, Mycenaean style fineware is rare while imported Aiginetan Gold Mica storage, cooking, and mixing vessels comprise between 7 and 10% of the total pottery assemblage (Rutter 1989, 12; Lindblom 2001, 41), with smaller numbers of Cycladic and Cretan pots probably obtained through Aiginetan intermediaries. Tsoungiza may have looked not south to Mycenae, but west toward the thriving center at Aidonia at this time (Wright 2004, 125). It is not until LH IIA that a significant connection can be demonstrated with the Argolid, and specifically Mycenae. Although imports of Aiginetan utilitarian vessels held steady at approximately the same levels as in LH I (Rutter 1993, 82–85, table 1), trench EU 10 produced high-quality Mycenaean fineware, including a Vapheio cup and four piriform jars so similar to examples from Mycenae that they may have come from the same workshop (Rutter 1993, 74–75, 79; Mountjoy 1999, 199). By this time, then, Tsoungiza was being drawn into Mycenae's orbit, although we cannot say with certainty that Tsoungiza had been incorporated politically as opposed to simply participating in economic transactions with an emerging center of pottery production and trade at Mycenae (Rutter 1993, 91). Indeed, in LH IIB both Mycenaean and Aiginetan imports actually declined and the LH IIIA1 sub-phase is not well known (Mountjoy 1999, 200). Subsequently, a ceremonial feasting deposit of LH IIIA2 (trench EU 9) consisting of cattle bones, drinking, serving, and cooking vessels, and a fragmentary ceramic female figure has been interpreted as the remains of a regional feast intended to cement alliances between elites at Mycenae and Tsoungiza (Dabney, Halstead, and Thomas 2004). The analysis of a pit with contents dating to LH IIIB1 shows that residents of tiny Tsoungiza had access to the same range and quality of pottery as Mycenae, indicating a close link but not necessarily strict control (Thomas 2005; this may already have been true in LH IIA: Rutter 1993, 90). Thomas also reinterpreted the so-called potters' shop in House B at Zygouries as a workshop for the manufacture of perfumed olive oil, implying a close link with Mycenae's interests in LH IIIB (Thomas 1992). In conclusion, the southwestern Corinthia was only gradually incorporated into the political economy of the Argolid. Wright has associated the Nemea Valley with a "periphery model," in which such regions exhibit considerable autonomy, participating in alternative social and economic networks before being incorporated into palatial economies to varying degrees in LH III (Wright 2004, 127).

The Northeastern Corinthia

The northeastern Corinthia, comprising the Isthmus and the coastal plain to its west, was agriculturally fertile, with well-watered and deep arable soils, and positioned advantageously at a crossroads of land and sea travel in the Aegean (Fig. 9.3). Despite the considerable distance and rugged terrain that separates the northern Corinthia from the Argolid, Mycenae has always loomed large in discussions of the political status of the Isthmus. Archaeologists have long puzzled over the fact that despite these advantages, neither a palace nor a complex political hierarchy seems to have emerged there in the Mycenaean period. Rutter nicely expresses the conundrum: "Why had Mycenae become so enormously rich by the beginning of the Mycenaean era, while Corinth had not? Surely Corinth was as well situated in terms of proximity to water and fertile land as Mycenae, and it was certainly better positioned to take advantage of trade" (Rutter 2003, 78). There are at

least three plausible scenarios to explain the Corinthia's missing palace:

1. There was no palace because Mycenae exerted political control over the Corinthia, suppressing the development of independent palace centers and indigenous hierarchies. In this scenario we might expect provincial governors living at large sites in high-status dwellings.
2. There was no palace because Mycenae did not exert political control, and for some other reason hierarchical complexity did not develop.
3. There was a palace and hierarchical complexity, but we have not yet found or recognized these things.

In this paper I take the position that the second scenario is most likely, and I suggest reasons that complexity may not emerge despite obvious advantages.

The reasoning behind the first scenario is that Mycenae, as the closest and most powerful palace center, could not have ignored the potential for control of agricultural resources and access to land and sea routes, and the inhabitants of the northern Corinthia were helpless to resist this extension of political "interest." This argument has been advanced, with varying emphasis on geographical, environmental, or political factors, by Bintliff (Bintliff 1977, 345–347), Hope Simpson (Hope Simpson 1981, 9–11), Sakellariou and Faraklas (Sakellariou and Faraklas 1971, 43), Salmon (Salmon 1984, 17–19), and others. That the argument can be made with recourse not to evidence but to logic alone is shown by Salmon's comment that "...it is impossible to believe that the inhabitants of the Corinthia...were able to retain their political independence" (Salmon 1984, 17). We can deconstruct this perspective by making a few points. There is clearly a hint of geographical or environmental determinism in the implication that natural advantages should lead inexorably to hierarchical complexity, unless constrained by some outside agent, in this case Mycenae. This determinism seems to be based on a mechanistic evolutionary expectation that the different regions of the Mycenaean core area should have passed through an evolutionary trajectory from chiefdoms to states in the Late Bronze Age, again unless actively constrained in some way. Finally, this is an archaeological argument *ex silencio*: the lack of power centers, such as palaces and fortified citadels, is taken to prove something equally elusive – domination from Mycenae.

There are two further arguments marshaled in favor of this position: the Catalogue of Ships in Book 2 of Homer's *Iliad*, and the built roads leading from Mycenae to the north. The list of ships and leaders mustered for the Trojan War in the *Iliad* appears to assert that Agamemnon exercised sovereignty over the Corinthia and beyond:

Those who held Mycenae's citadel,
And wealthy Corinth, and ...
All these were commanded, a hundred ships,
By Lord Agamemnon, son of Atreus

(Il. 2.569–570, 576, trans. S. Lombardo, Indianapolis, 1997).

Yet any attempt to conform Homeric epic to historical reality prompts many questions but yields few answers. Even if we can imagine a historical Trojan War, it is not at all certain that the political relationships implied in the Catalogue prevailed in the Bronze Age, rather than closer to the time of the commission of the *Iliad* to writing; or if they ever prevailed at all as opposed to being a kind of literary topos (Morris 1997). Even if the Homeric tales sometimes preserve the names of places occupied in the Bronze Age, there is no compelling reason to believe that the Catalogue of Ships reflects a Bronze Age political reality (Bennet

1997).

The existence of formal built roads emanating from the citadel at Mycenae demonstrates that Mycenae's rulers were concerned to maintain access to distant locations. The purposes of these "highways" remain a matter of debate, some insisting that they were meant primarily for the transport and deployment of troops (Hope Simpson 1998; Hope Simpson and Hagel 2006, 170–175), while others emphasize access to fertile agricultural areas (Jansen 1997, 2002). Surely they were built to accommodate many such purposes, and the extraordinary resources devoted to them indicate their importance to the state. But whether these roads were meant to facilitate access to the northern Corinthia, and whether in fact they extended that far, are different matters. It is striking that at least three well-built roads connect Mycenae with fertile upland plains to the north. On present evidence, however, none can be traced further north than Nemea/Kleonai (Lavery's Highway M3), Zygouries (M2), or Tenea (M1) (Lavery 1990, 167–169; Hope Simpson and Hagel 2006, 153), and one wonders if these fertile regions may have been the roads' ultimate destinations (Lavery 1995). Morgan rightly contrasts a single day's round-trip journey to the Nemea Valley with the journey to the Isthmus in terms of the resources required to maintain contact and control (Morgan 1999, 352). Remains of a Mycenaean road have been claimed for Mylos Cheliotou on the northern Corinthian plain, but because of the uncertain association of pottery with the feature, a Mycenaean date cannot be established with confidence.

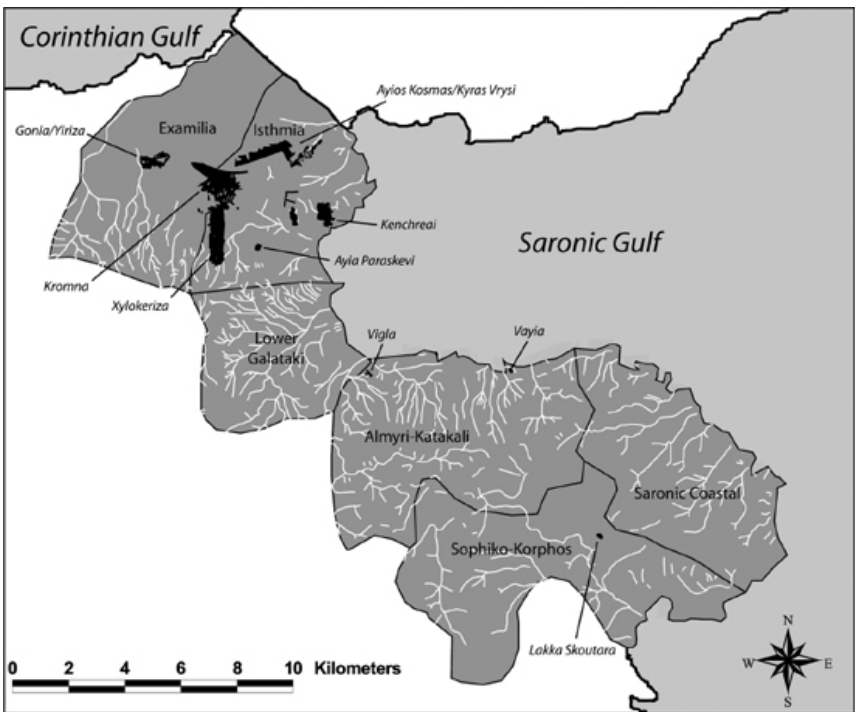


Figure 9.4. The survey area of the Eastern Corinthia Archaeological Survey, divided for analytical purposes into six drainage basins. Archaeological survey units, concentrated in the northern Corinthian plain, are shown in black.

The second scenario, that Mycenae did not dominate the northeastern Corinthia, and

still no hierarchical complexity emerged, is an alternative solution that finds support in archaeological data, including those collected recently by the Eastern Corinthia Archaeological Survey (EKAS) (Fig. 9.4) (Tartaron *et al.* 2006; Pullen and Tartaron 2007). Unlike the southwestern Corinthia, the northern Corinthian plain did not experience a hiatus in settlement in the Middle Helladic period. In fact, several sites were occupied more or less continuously from the Neolithic period to the end of the Bronze Age, a span of up to 5,000 years.

The intensive survey of EKAS provides new details about the later prehistoric settlement pattern. In Fig. 9.5 we perceive a pattern in which the same few sites are occupied over a vast expanse of time. Yet none was much more impressive than the other – there is no indication, from site size, density of material, or presence of exotic goods to suggest a hierarchical relationship among these small communities. Instead, they seem to cluster around preferred locations on ridges overlooking arable land, water supplies, and routes of communication. Further, if we step back and look at the broader Isthmian region, we see that the spacing of Bronze Age settlements is quite regular, suggesting that these communities exploited roughly equivalent territories, not an unlikely situation in this uniformly fertile and relatively undifferentiated setting (Fig. 9.6). This evidence suggests a long-term, stable adaptation to the environment in a *heterarchical* rather than hierarchical organization.

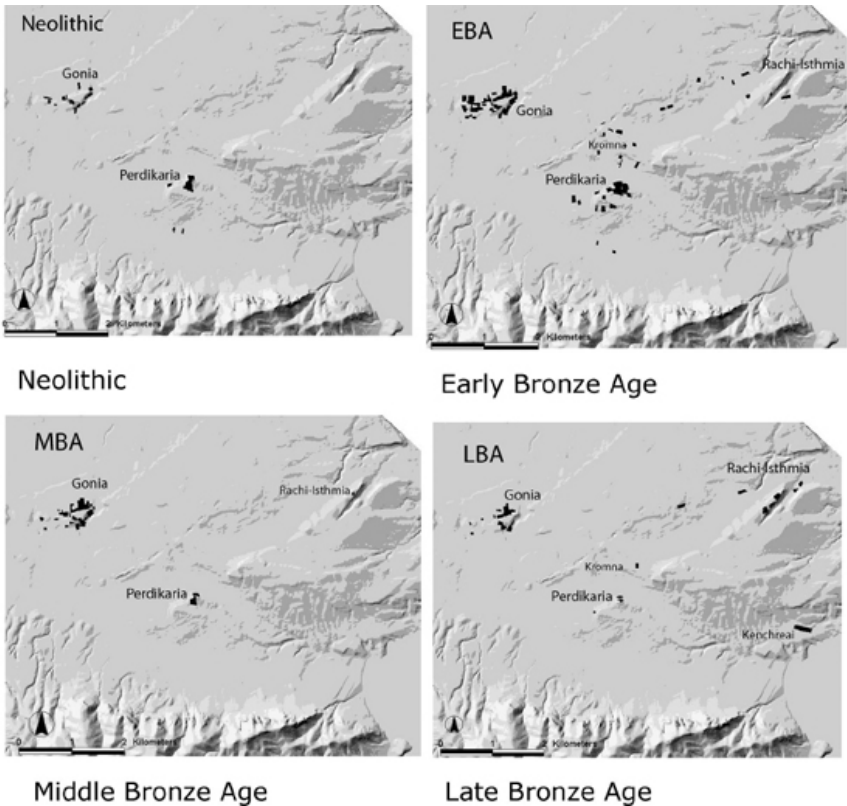


Figure 9.5. Evidence for long-term stability in the northern Corinthian plain: EKAS survey

units with positive artifactual evidence for presence in broad prehistoric periods are shown in black.

Here I want to invoke an intriguing article in which Haggis sought to demonstrate, based on recent survey and excavation, that settlement at late Prepalatial (EM III–MM IA) Kavousi in eastern Crete was a more stable adaptation to the Mediterranean environment than that of the later Neopalatial period of MM III–LM I (Haggis 2002). The Prepalatial pattern consisted of several small clusters of hamlets and farmsteads oriented toward specific areas of arable land and major springs. By contrast, in MM III–LM I there was a drastic population shift to coastal centers and a shift in subsistence to extensive, irrigation farming marking the area's incorporation into the palace economy. For Haggis, the “well integrated” Prepalatial settlement system was heterarchical, with long-term stability in land use and social relations, based on intensive horizontal interactions among communities. Under palatial influence, the local economy was transformed to a state of high “connectedness,” characterized by hierarchical, vertical organization (“complexity”). From this point of view, highly connected systems are inherently unstable because they break down the long-term bonds of communities with neighboring communities, and of people to the land and its resources. Traditional intensive, diversified, local-scale economies may be replaced by riskier practices focusing on the generation of a surplus of a narrow range of domesticates such as wool, grain, and olives. Further, palatial economies may replace intercommunity relations, based on kinship and land use accommodations, with political relationships that tend to use resources according to political, not subsistence, principles.

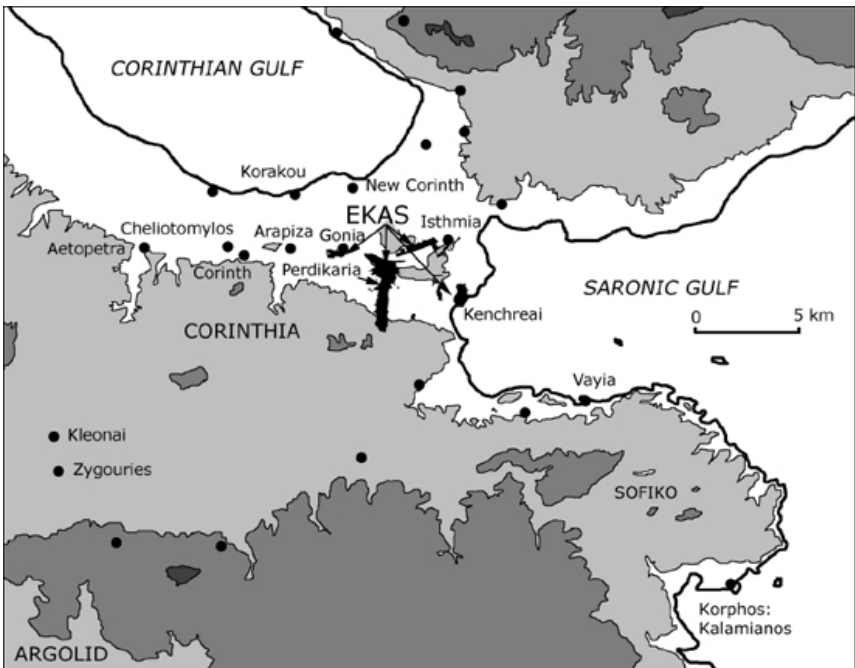


Figure 9.6. Map of the Corinthia showing the distribution of major Bronze Age sites.

The northern Corinthian plain conforms well to Haggis' image of a well-integrated human landscape: a heterarchically organized, stable long-term adaptation to a generous

environment. Under such circumstances, there is no inevitable trajectory to political complexity in the form of a palace state, and in fact there is every reason to believe that such a system could effectively resist the overtures of a distant agent such as Mycenae. The fact that this settlement pattern shows little movement toward hierarchical complexity makes the third scenario, that a palace lies waiting to be found, increasingly unlikely. Korakou may prove to be an order of magnitude larger than other sites along the plain, indicated perhaps by walls located some 700 m from Blegen's excavation trenches, but this remains to be demonstrated. Recently, Tzonou-Herbst and Boyd presented preliminary results of a geophysical survey at Korakou that seem to reveal a massive enclosure wall around the main settlement (Tzonou-Herbst and Boyd 2007). The form of the anomaly and the setting of the site are more reminiscent of an EH II fortified seaside settlement than a Mycenaean citadel, however, and this appears to be corroborated by J. Rutter, who reports that after a fire some years ago, he walked the site and noted the mudbrick traces of a large wall, all around which he found not Mycenaean, but EH II pottery sherds (J. B. Rutter, pers. comm.). So at present there is little evidence for the interpretation of Korakou as palatial or as the seat of a provincial governor from Mycenae.

The evidence of pottery supports these arguments. The northern Corinthia was slow to adopt the Mycenaean style. At LH I Korakou, there are a few sherds only of LH I style, and a small number in the palatial and pseudo-Minoan styles of LH IIA (Davis 1979). Instead the main connection in the early Mycenaean period was with Aiginetan trade networks. This relationship began at least as early as the Middle Bronze Age, but by LH I the inhabitants of Korakou were importing a range of Aiginetan cookware, kraters, and large storage and pouring vessels (Davis 1979, 241, 258–259; Mountjoy 1999, 199–200; Lindblom 2001, 41; Morgan 1999, 351). Middle Helladic traditions persisted longer in the northern Corinthia than in the Argolid: in the East Alley Gray Minyan, Matt Painted, and Yellow Minyan wares were found together with sherds of Mycenaean LH I and LH II styles (Davis 1979, 256–257). As the export industry at Kolonna declined in LH IIIA2, so too did imports in the northern Corinthia in general. In Late Mycenaean times, there are strong stylistic connections with the Argolid in both forms and decorative motifs, but virtually all pottery vessels and terracotta figurines are believed to have been made locally (Morgan 1999, 353). Thus, the near absence of true imports from the Argolid makes the presence of Mycenae even more phantom-like.

I would like to briefly mention sections of roads and cyclopean walls in the northern Corinthia, since they do exist and there is much controversy about them. As mentioned above, a Late Bronze Age date for a built road at Mylos Cheliotou has been claimed, though the dating cannot be confirmed and the feature is no longer visible. There is a cyclopean wall near the base of the north slope of the flat-topped hill known as Perdikaria, sitting astride an obvious corridor through the northern Corinthian plain (Blegen 1920, 7, fig. 7). The purpose of the wall, of which about 100 meters survive, is unknown, but its placement does not inspire confidence that it would have had real defensive strength. Still more contentious are the scattered sections of cyclopean wall around Isthmia that Oscar Broneer asserted were parts of a trans-Isthmian defensive wall constructed around the end of LH IIIB to forestall some anticipated invasion (Broneer 1966, 1968). He even speculated that "...the wall was erected by concerted efforts of the kings and chieftains in the thickly populated Argolid" (Broneer 1966, 357). Others have preferred to see the remains as the retaining wall for a road (Kardara 1971) or rejected the identification of specific segments of the wall as Mycenaean (Gebhard and Hemans 1997). Recently, Morgan has reviewed the architecture and the pottery recovered during Broneer's excavations in and around the walls

(Morgan 1999, 362–365, 437–447). Much of the pottery, which had never been closely studied, is at present inconclusive as to date, and the integrity of many of these deposits is questionable (there is some earlier and much later pottery mixed with Mycenaean LH III). Some scholars, notably Hope Simpson, continue to press the case for Broneer's conclusions (Hope Simpson and Hagel 2006, 123–140), and there is no reason to doubt that the Mycenaeans possessed the technical skill. But having inspected the segments that are still visible, I am sympathetic to those who doubt that these are the remains of a single vast, coordinated project. Yet there is a larger point to be made: for the reasons I have put forward already, I am inclined to view all of the walls and roads in the northern Corinthia as the products of local masons and engineers. These constructions are adequate but hardly comparable to the bridges, roads, and walls of the Argolid. Why must we invoke a foreign power? The Corinthians had the same needs as other Mycenaeans for such constructions, and if they could manufacture their own pottery in imitation of Argive exemplars, they certainly could have mastered the necessary masonry techniques by observation and autopsy. In conclusion, Mycenae may have been too occupied with a complex and competitive Argo-Saronic world to commit the resources necessary to attempt to bring the northern Corinthia under direct control.

The Saronic Gulf

In the third and final case, I examine the Corinthia's Saronic coastline (Fig. 9.3), and the possibility that Kolonna on Aigina and Mycenae were in competition for economic and political ascendancy in the period from the Shaft Grave era until the establishment of the palace at Mycenae around 1400 BC. It is well known that Kolonna was likely the most prominent non-Minoan site of the Aegean in the Early and Middle Bronze Age, when the settlement was enclosed by a series of monumental fortification walls over half a millennium. Several authors have remarked on Kolonna's early and substantial contacts with the Minoan world, and the rich shaft grave comparable in form and content to those at Mycenae, but predating them (Rutter 2001, 124–130; Niemeier 1995; Kilian-Dirlmeier 1997). It is possible that Kolonna was instrumental in facilitating Mycenae's access to the Minoan influences that are so conspicuous in the Shaft Graves.

To introduce the notion of competition, I would like first to propose that the Saronic Gulf was a Bronze Age "small world" in the sense that Broodbank (Broodbank 2000, 175–211) and A. and S. Sherratt (Sherratt and Sherratt 1998) meant it, and something like the "microregions" of Horden and Purcell (Horden and Purcell 2000, 77–87, 123–152). Small worlds are composed of communities bound together by being enmeshed in intensive, habitual interactions, because of geography, traditional kinship ties or alliances, or a host of other reasons. There may be a high level of interdependence and communities may come to think of themselves as forming some kind of natural entity. These small worlds are in turn nested within interregional networks of trade emporia and other nodes of interaction (Sherratt and Sherratt 1998; Momigliano 2005).

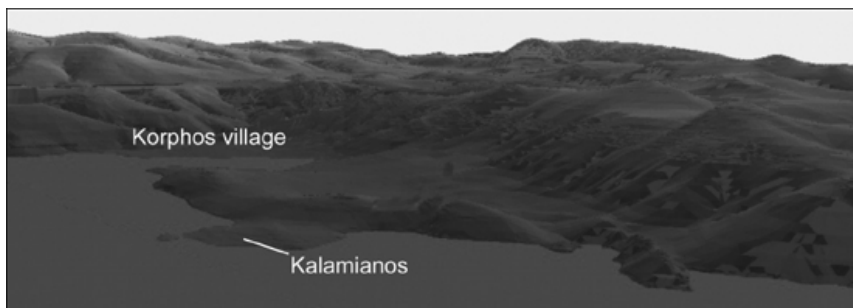


Figure 9.7. Digital terrain model of the Korphos area, a good example of a small coastal lowland on the Saronic Gulf backed by high mountainous terrain. The recently discovered Mycenaean site of Kalamianos is discussed below (Image courtesy Jay S. Noller).

The notion of a Saronic small world of settlements orbiting around Aigina in the Bronze Age finds support in geographic, topographic, phenomenological, and archaeological evidence. The Saronic coastline is rugged and vertical (the main exception being the broad coastal plain around Troizen in the southwest), punctuated irregularly by tiny coastal plains and inlets suitable for small-vessel harborage. Typically, these small coastal spaces are backed by rough, mountainous terrain that inhibits access to the interior (Fig. 9.7). With limited arable land and other resources in the immediate vicinity and possibly irregular access to sources of inland supply, small communities in these topographic settings must have looked to the sea for participation in economic and social networks. With communication usually easier by sea than land, voyaging within the Saronic was a means to sustain small communities through networks of social and economic interdependence. Moreover, because the Saronic Gulf is partially enclosed by the landmasses of Attica and the Argolid, the Gulf is sheltered and calm relative to the open Aegean (Fig. 9.8). This is significant because year-round voyaging will have been possible, serving to cement the close ties of Saronic coastal communities.

This topographic setting inspires a phenomenological argument. The Saronic never gives the impression of a vast, open sea – land is virtually always in view and one coastal settlement was in visual contact with several others. With a view to the interior blocked by steep hills, the constant frame of visual reference for coastal settlements was the sea, and particularly Aigina, looming on the horizon from most coastal vantage points. For settlements on the western shores such as Kalamianos and Ayios Konstantinos, there was unimpeded intervisibility with Kolonna. We can make this point by looking south from Kalamianos: our view is of sea with land all around the horizon (Fig. 9.9). In contrast to the modern expression of “looking out to sea” (an obvious land-based perspective), we might imagine instead the residents of Kalamianos facing *in* to the geographical and economic center of the Saronic Gulf. From a phenomenological perspective, this visual connection must have encouraged people to feel that their world was the Saronic. Aigina was the geographical as well as cultural, political, and economic center of this small world.



Figure 9.8. Google Earth satellite image of the Saronic Gulf region, showing the enclosing land masses of Attica and the Argolid.

Nevertheless, the Saronic Gulf was also a crossroads, a natural entry point from the Aegean islands and Crete, and a place of overlapping spheres of exchange and other interactions. Middle and early Late Helladic levels at Kolonna have produced Cycladic, Minoan, and locally made Minoanizing pottery, some of these in the MH II shaft grave, as well as an ashlar block inscribed with a double axe mason's mark, reused in a Late Roman building (Hiller 1993; Niemeier 1995). Mycenaean LH I style is rare at Kolonna, however, and this is true also of the circum-Saronic settlements, which relied on Aigina for imported pottery throughout the Middle Bronze Age and early Mycenaean period (Siennicka 2002, 181–184; see Lindblom 2001, 43 table 9 for findspots of Aiginetan pottery and references). We find a similar pattern of rare LH I style and common Aiginetan in Attica and at certain sites in the Corinthia. Mountjoy has some interesting comments about exchange systems in LH I (Mountjoy 1999, 20, 492). She finds it surprising that Lustrous Decorated and other early Mycenaean styles should be so rare in the Saronic and the Corinthia, despite the easy voyage around the Gulf of Argos, where they are found in abundance. She notes that the shapes in which Aiginetan workshops specialized, including hydrias, amphoras, and kraters, do not duplicate the fine table ware of LH I style, so redundancy is not an explanation. She cautiously speculates that Aiginetan activity might account for the lack of pottery decorated in the LH I style, and that Lerna and Kolonna may have had separate interaction spheres. I would go further to suggest exclusionary practices, a case of Bronze Age protectionism perhaps, which hints not just at economic prowess but also a final phase of Aiginetan political muscle.



Figure 9.9. View to the Saronic Gulf from above the site of Kalamianos, facing southeast. In the distance, the horizon is dominated by the islands of Aigina and Angistri, and the Methana peninsula. Photograph by the author.

LH II was a crucial transitional time when Mycenaean pottery of palatial and pseudo-Minoan type found its place at Aigina, Kiapha Thiti, and Athens by LH IIA, but at that same time Aiginetan imports still made up 7–10% of the corpus at Tsoungiza and 20% at Kiapha Thiti (Kiapha Thiti: Maran 1992, 204–211). Kolonna's export industry did not decline until LH IIIA2, coinciding neatly with the establishment of the palace at Mycenae. By this time, Mycenaean fineware and utilitarian vessels superseded most Aiginetan shapes. It is reasonable to assume that this shift in production and consumption strategies reflects, at least in part, the appropriation of the export market by Mycenaeans from the Argolid centers. Still, exports of Aiginetan storage and cooking vessels continued into LH IIIC, mainly because of superior working qualities such as permeability and thermal shock resistance (Lindblom 2001, 41; Zerner 1993, 55).

Something momentous occurred in the Mycenae–Kolonna relationship between LH II and IIIA, but we don't know what. If we accept that the pottery evidence reflects some kind of competitive environment, what was its nature? If we say that Mycenae eclipsed Kolonna, what does that mean and how did it happen? Was there a clash between a great land and great sea power? Voutsaki has made an elegant, diachronic case for Mycenae's dominance in the Argolid (Voutsaki 1995, 1998, 2001), but can this argument be extended to the Saronic? The number of known sites around the Saronic increases almost two-fold in late Mycenaean times when corrected for phase durations, and numerous new settlements indicate a dynamic expansion (Siennicka 2002, compare figs. 1 and 2). Sites like Ayios Konstantinos and Galatas were very Mycenaean, yet provincial at the same time (Konsolaki-Yannopoulou 2002, 2003). Unfortunately, the archaeological record at Mycenae and Kolonna fails us at a critical moment. The early Mycenaean period at Mycenae is known mainly from burials as much of the early Mycenaean town was destroyed by later construction or remains buried (Iakovidis *et al.* 2003; Gauss in press). At Kolonna, information on early Late Helladic settlement is limited and Late Mycenaean occupation is known from pottery alone. The situation is far from grim, however, since any such conflict was likely played out in contested territories and overlapping spheres of influence. The western Saronic Gulf coast is situated in such an intermediate position, both geographically and historically.

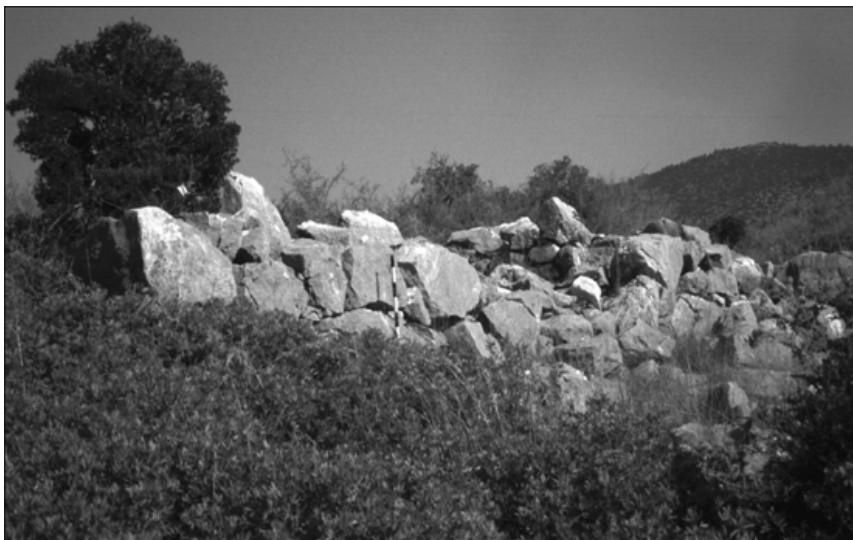


Figure 9.10. Architectural remains at the site of Kalamianos, showing the characteristic cyclopean masonry technique that indicates a substantial settlement of Mycenaean palatial times. Photograph by the author.

The Saronic Harbors Archaeological Research Project

The Saronic Harbors Archaeological Research Project (SHARP) has as an explicit aim to test the notion that if a process of competitive interaction occurred between Mycenae and Kolonna, it should be reflected in archaeologically visible changes in frontier zones where the two spheres of influence intersected.² A working hypothesis is that the Saronic coast of the Corinthia (extending even to inland northern Corinthia) was a political periphery between two powers of the early Mycenaean period: one venerable and one emergent (for details of this argument see Pullen and Tartaron 2007). The evidence suggests that the competition culminated in the absorption of this region into Mycenae's political orbit, but can we learn how this happened?

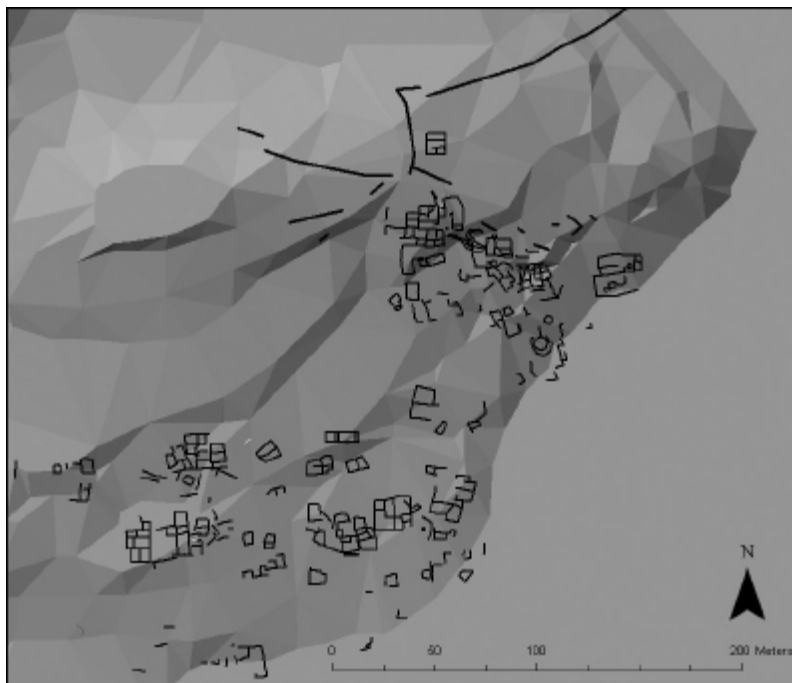


Figure 9.11. Plan of extant Late Bronze Age architecture at Kalamianos, generated by highprecision diff GPS survey and overlaid to SHARP's GIS.

SHARP focuses on Kalamianos, a coastal Mycenaean site, and its environs near the modern fishing and resort village of Korphos in the southeastern Corinthia. We first recognized this as a substantial Mycenaean site in 2001 and completed a first season of investigation in 2007.³ Aboveground remains of architectural foundations in cyclopean masonry, preserved up to 1.5 m in height, are spread across an area of about 10 ha, with some portion of the site now submerged in the sea (Fig. 9.10). An initial plan of the architecture, generated by high-precision differential GPS survey, reveals a relatively densely built-up urban settlement (Fig. 9.11).⁴ A further intriguing feature is a fortification wall that enclosed part or all of the settlement, preserved in a number of segments of varying length. We have already before us, therefore, the extraordinarily preserved architectural plan of a Mycenaean town without having placed a shovel in the ground.

In the shallow waters offshore, we were able to identify beach rock formations cemented with countless Late Helladic pottery sherds, leading to a first approximation of the configuration of the shoreline in Mycenaean times (Rothaus *et al.* 2003; Tartaron, Rothaus, and Pullen 2003). This information, along with evidence near the shoreline for initial reduction of raw nodules of Melian obsidian as well as boulder-sized pieces of worked and unworked Aiginetan andesite, points to a likely harbor function.

Kalamianos may be ideal for investigating the dynamics of competition between incipient states. The settlement occupies a liminal position at the edge of land and sea, roughly midway between Kolonna and Mycenae, and potentially spans precisely the period in which the entire process unfolded. While the evidence for activity in the early Mycenaean period is for now limited to pottery, the extensive architectural remains can be

identified confidently as belonging to the palatial period, as can the large majority of the pottery associated with them.

An ongoing initial phase of mapping, surface survey, underwater survey, and (eventually) excavation of selected buildings and other features (2007–2009) will clarify many aspects of chronology and site history. Our initial assessment portrays Kalamianos as a significant second-order settlement and harbor that was possibly controlled by Mycenae in palatial times. In the late Middle Helladic–early Late Helladic, Kalamianos must have been part of the Saronic small world centered on Aigina, and it is intriguing to note that obsidian and volcanic stone may have arrived at the site already in the Early Bronze Age or even earlier.⁵ Because the architecture indicates a thriving community of late Mycenaean times, Kalamianos may reveal information about the role of a small harbor in newly configured economic networks. As economic power shifted and the old Saronic world was incorporated into a wider Mycenaean world, what new webs of connectivity were created and what place did Kalamianos have in them? There may have been other strategic reasons for Mycenae to develop a harbor here: might Kalamianos have been a direct and potent statement of Mycenae's ascendancy in the Saronic, in full view of Kolonna?

Shifting our gaze to the land, the surface survey will capture the hinterland of the coastal area and address the relationship of Kalamianos with the interior. We know already of one small Mycenaean settlement, with similar cyclopean architecture, perched atop a high cliff overlooking the Saronic coast with no ready access to the sea. From this settlement, Kalamianos lay in plain view below, but although the two sites almost certainly overlapped in time, we know nothing of their relationship. We anticipate that the discovery of these and other traces will yield insights into a very local Bronze Age world.

Turning to the question of political competition and transformation, we might formulate a series of questions. Are there material markers at sites like Kalamianos that signal the decline and demise of Kolonna's economic and/or political dominance in the Saronic in the face of expanding influence from the Argolid? One indication would be changes in assemblages of ceramics and other objects. If the distinctive volcanic-mineral tempered fabrics from Aigina dominate in the earlier Mycenaean period and then are replaced by ceramics originating from mainland sources in the later Mycenaean period, this will reflect changing economic patterns and new connections for the Korphos region. A second source of information will be the settlement patterns generated by surface survey in the Korphos region. Are there distinctive changes in site number, location, function, and material culture in the transition from early to late Mycenaean times? At Kalamianos, a careful study of the built environment will yield important diachronic information on the size, layout, and construction techniques of the town. Geomorphological study and underwater survey will give us a much more precise fix on the configuration of the Bronze Age coastline, permitting us to address our hypothetical designation of Kalamianos as a harbor. Excavations within the urban center will reveal architectural phasing, as well as the range of material culture produced, imported, and consumed by the inhabitants. Taken together, these studies will help us to understand the changing role of this coastal zone within wider regional and "international" worlds, and just possibly clarify how small-scale polities are incorporated into larger secondary states within the context of peer-polity interactions (Pullen and Tartaron 2007; Parkinson and Galaty 2007). The evidence we have collected to date leads us to the hypothetical narrative for Kalamianos that I have presented here, but other scenarios are possible and we must be prepared for the many surprises that the site and its environs surely hold in store for us.

Conclusions

In this paper, I have tried to show that by examining local variability, we can break down the Mycenaean world. This was not a world divided up among palaces with a few sheep in the interstices between them. It is just as misleading to speak of the “Mycenaean Corinthia” as it is to speak of the “Mycenaean economy.” As we have seen, the southwestern Corinthia came under the economic influence of Mycenae in the early Mycenaean period, but was incorporated only gradually into the political realm of the palace. By contrast, the northern Corinthia was not subject to any palace, yet it was a vibrant, busy place that interacted with palatial and non-palatial entities. The Saronic coastal zone of the Corinthia presents yet another pattern: the gradual transfer from one sphere of influence (Aigina) to another (Mycenae). These differences offer the possibility of an alternative and more nuanced narrative of the realities of political and economic power in the Mycenaean world. Instead of flattening out variability and complexity, we ought to build from knowledge of each region so that we input truly meaningful data to the kinds of useful comparative models we have heard about in this conference.

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Notes

- 1 At least two tholos tombs are now known in the Corinthia, at Mylos Cheliotou (I. Tzonou-Herbst, pers. comm.) and near Phlious (Whitley 2002–2003, 21–22, fig. 35; Casselmann *et al.* 2004, 39), and surely more will be revealed with time. The Mylos Cheliotou tomb appears to be early (LH I or LH II), while the one at Phlious has not been securely dated.
- 2 SHARP, co-directed by Daniel Pullen and Thomas Tartaron, is carried out under the auspices of the American School of Classical Studies at Athens, with the approval of the 37th Ephoreia of Prehistoric and Classical Antiquities and the 25th Ephoreia of Byzantine Antiquities, and a permit issued by the Greek Ministry of Culture.
- 3 The following observations are based on results from the recently completed inaugural season; in this early stage of analysis all conclusions must be considered preliminary

- 4 and subject to substantial revision.
There was surely more architecture in the Mycenaean palatial-period settlement, but heavy vegetation, millennia of collapse and other post-depositional processes, and modern activity have combined to conceal or destroy parts of the architectural record. It is all the more remarkable, then, that so much is preserved.
- 5 D. Pullen (personal communication) has identified a volcanic rock tempered “Saronic fabric” of Final Neolithic to Early Helladic I date on surface sites of the Saronic coast of the Corinthia, and Early Helladic pottery was found, particularly near the water’s edge, during survey of the site in 2007.
- 6 Note, for example, the group of tholos tombs at Galatas on the mainland opposite Poros: Konsolaki-Yannopoulou 2003.

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CITADEL AND SETTLEMENT: A DEVELOPING ECONOMY AT MYCENAE, THE CASE OF PETSAS HOUSE

Kim Shelton

Introduction

Our concern at the Langford Conference is the political economy, or rather economies, of the Aegean Bronze Age. The plural form “economies” is certainly the better choice, since geographically and chronologically there must have been many different, distinct and perhaps, interrelated political economies.¹ There were certainly also stages in the development of those economies and a good deal of adaptation. I will explore here a specific place and time – the mainland center Mycenae during the “height of its culture and history.”² I would like to examine some possible characteristics of the political economy of Mycenae, especially the relationship between those on the top of the hill and those on the lower slopes. I will do this by using the excavations of Petsas House (Figs. 10.1 and 10.2) as a case study of the developing political economy at Mycenae as exhibited by an industrial and domestic structure in the main settlement (Papademetriou and Petsas 1950, 203–233; Papademetriou and Petsas 1951, 192–196 and pl. III; Iakovidis 2000, 63–66; Iakovidis 2001, 49–55; Iakovidis 2002, 18; Iakovidis 2003, 23–24; Iakovidis 2004–2006, forthcoming).

The Late Helladic IIIA period, conventionally dated to the 14th century BC, seems to be a time of great internal growth and outward expansion for the Mycenaean civilization (Voutsaki 1995, 62; Hankey 1997; Niemeier 1997; Bennet 2007; Shelmerdine 2001b, 349–354; French 2009). On the mainland, both the number of sites and the size of those sites increase throughout the century, while the same kind of growth is seen in mortuary evidence both in the foundation of new cemeteries, new tombs and increasing numbers of burials (Shelton 1996, 280–286; Cavanagh and Mee 1998, 61–88). All the data suggests the normal dynamics and birth-death ratio of a more populous and prosperous time. This is also the period when the Mycenaeans can be recognized clearly on the international stage. Evidence of international contact and foreign imports on the mainland was plentiful during the earlier Late Helladic II period, but only in LH IIIA do we see the reciprocal “Greek” products appearing in the eastern Mediterranean and in Egypt (pottery, primarily – especially containers for transport and storage of agricultural products such as oil and wine, together with worked ivory and glass (A. Sherratt and S. Sherratt 1991, 370–373; Gillis 1995; Hankey 1997; Shelmerdine 2001b, 353–354; S. Sherratt 2001, 219–224; and a number of papers from the Wace and Blegen volume, Zerner, Zerner and Winder 1993, especially those by Cadogan, Hankey, French and Cambitoglou and Papadopoulos). The imports to the mainland continue through the 14th century BC but are not as visible throughout the archaeological record in the following century. Frustrating our understanding of this important period is the lack of physical evidence from both center and settlements – due primarily to the success and building in Late Helladic IIIB (Cavanagh and

Mee 1998, 41–60; Shelton in prep. b with references to: Iakovidis 1983, 55–57; French 2002, 57–61; and Iakovidis *et al.* 2003, 14).

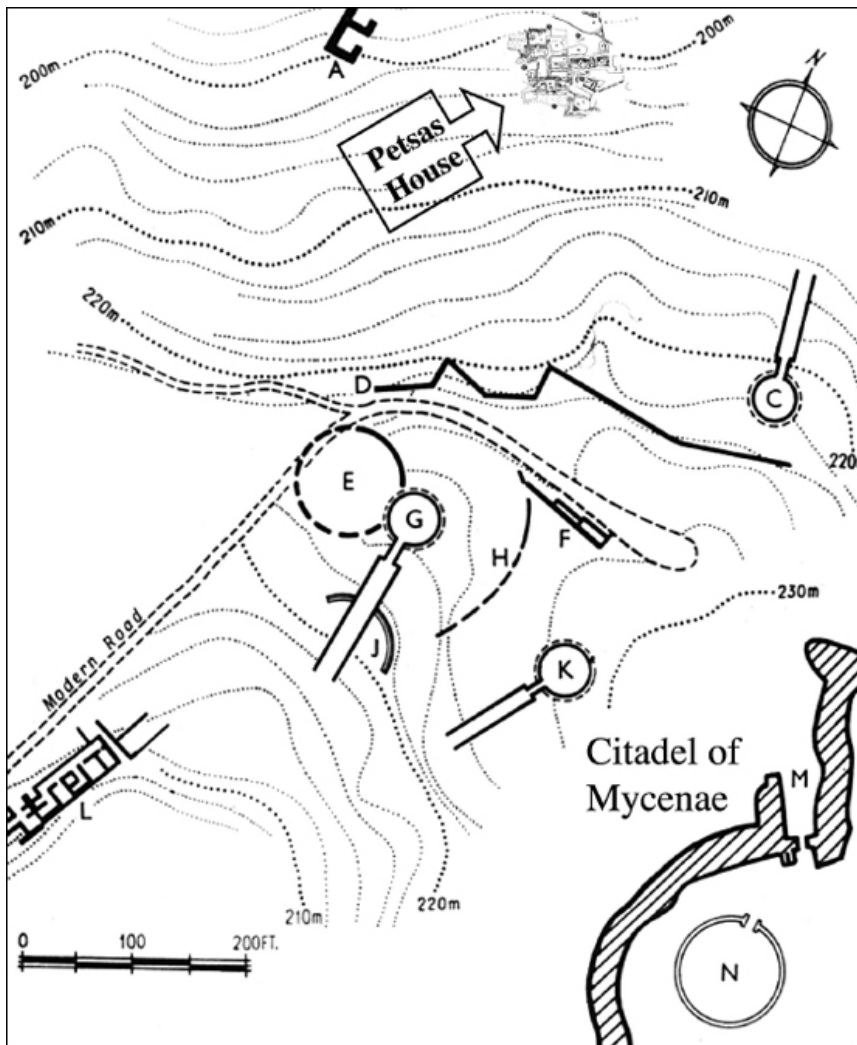


Figure 10.1. Plan of Mycenae, Prehistoric Cemetery Area and northwest portion of citadel with Grave Circle A (N) and Lion Gate (M) with location of Petsas House excavation (after Wace 1953).

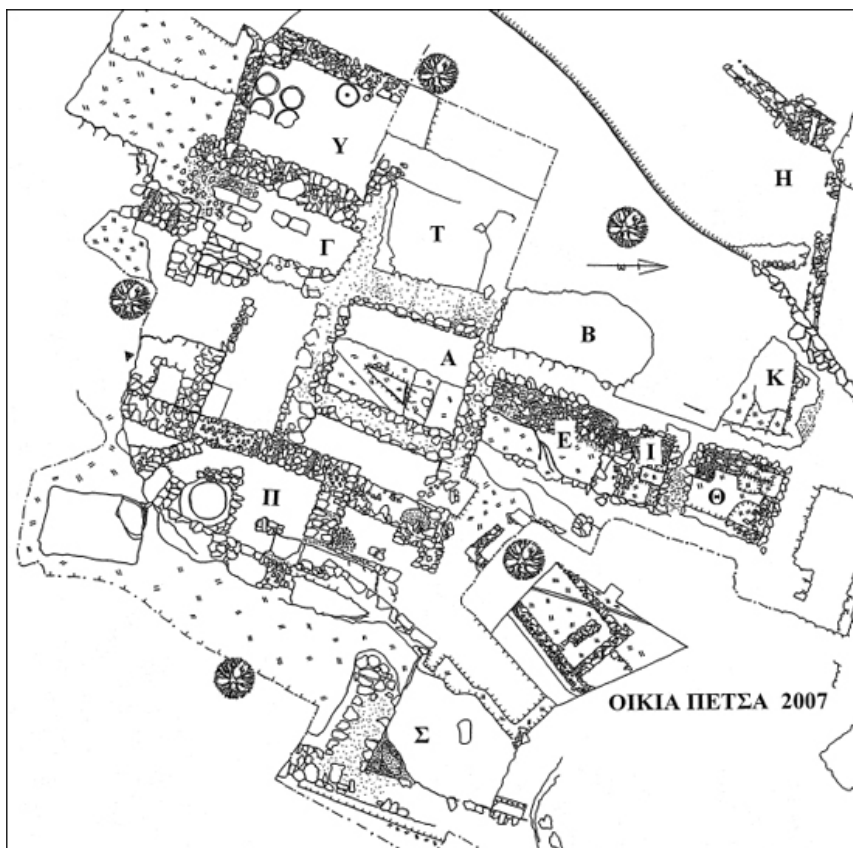


Figure 10.2. Plan of Petsas House, after 2007 season (© Kim Shelton).

What Came Before

Ironically perhaps, what we know more fully is actually the period before and the period after the important developmental stage that is examined here. Our evidence from LH II is entirely mortuary but includes the most diverse and extravagant period for burial architecture, traditions and originality of grave gifts, including display and consumption of great wealth, imported luxuries and major ceramic works (Wright 1995; Voutsaki 1999; Shelton 2003; French and Shelton 2005, 178–182). The LH II evidence suggests a period of extravagant competition among some segments of the population.

The widespread tomb/cemetery use is not immediately apparent as also widespread habitation in LH II, although certainly there is some occupation in the settlement area more readily identified with Late Helladic III. There was also certainly a grand structure on the top of the hill, whether we want to call it a mansion or palace – it was decorated with high-quality frescos and was the site of feasting with high-class pottery (French and Shelton 2005, 175–178). Elsewhere on the hill there was certainly habitation in spots but only bits and fragments with primarily sherds surviving the later building programs. The differentiation of tomb types and the very rich graves, *etc.*, suggest a level of independence and competition, not to mention wealth, status and rather unrestricted access to prestige

items and exotica. The prestige and originality is also seen among chamber tomb burials. Almost all chamber tomb cemeteries at Mycenae were initiated in LH II and most of the burials contain prestige materials in addition to some exotica and a majority of very fine decorated vases – most original and individualized pieces. The tomb groupings are based on land holdings and the various resources would have been under the ownership or control of families or clans (Cavanagh 1998; Shelton 2003, 35; French 2009).

What Came After

Late Helladic IIIB Mycenae paints a very different picture of economy and politics. Centralization and standardization are cultural characteristics of this time. Everything about the center/citadel and its relationship to its region suggests “complete control” (Bennet 2007; de Fidio 2001; Shelmerdine 2001a, 2001b, 333–340; Voutsaki 2001; and especially French 2009). The hill is built up and consolidated within the Cyclopean fortification walls. The primary areas of administration, storage, craft and religion are literally centralized within the confines of the surround walls. Construction is so orderly and well executed that it seems to be a real building program including palace, walls, complex structures on the hill and around the settlement. The West Cyclopean wall, which brought Grave Circle A and the Cult Center within the walls and within the physical, as well as the conceptual, sphere of the citadel, required detailed planning and reorganization which can only have come from a strong central authority – however it was organized. This was again the sign of the times; the bulk of public works also belong to the early 13th century BC we think, and were likely a product of a large work force that was diversified at this period (Iakovidis *et al.* 2003; French 2009). In early LH IIIB there is widespread construction in every sector, but of a different type from what had been implemented earlier. This includes “Houses” strongly built, mainly on massive artificial terraces that allowed the space available to be expanded and contributed considerably to the strength of the structures (and to the destruction or eradication of earlier remains) (Shelton in prep.b with references: Wace 1953, 9–15; Tournavitou 1995, 1–68; Shear 1987; Iakovidis *et al.* 2003, 48). It seems likely that some large-scale disaster had occurred at the end of the previous period, which led to this change of building practice (see more below) and may have spurred on other elements of change. There certainly are many indicators of systems of strict palatial control (Voutsaki 1999). As French has suggested (French 2009), from sometime around 1300 BC there may have been deliberate regulation of land usage and that from that period no tombs were to be cut in areas set aside for settlement. Sumptuary controls on elite mortuary practice must also have been implemented since the elaboration of burial characteristics and the inclusion of prestige items is entirely lacking. Many scholars have remarked on the striking relative poverty of LH IIIB chamber tomb burials (French 1969, 71; Alden 1981, 55, n. 2; Shelton 1996, 290–293; Cavanagh 1998; Cavanagh and Mee 1998; Voutsaki 1999 and 2001; Shelton 2003, 35). In fact, no imported items manufactured after 1300 BC are found at Mycenae except for a few scruffy scarabs (French 2009; Phillips 2007).

Late Helladic IIIA

In order to understand the development of the political economy at Mycenae, from one of kinship ties, competing elites, and individual control and success to one of overwhelming centralized control and standardization we must look to the intervening period – Late Helladic IIIA. We should expect change in every sphere of the culture, especially in the nature of the political economy. There is certainly an ever-increasing interaction with the wider Mediterranean world and a strong presence on Crete including the possibility of

centralized control of at least part of the island (Driessen 2001). Was there an impact at home? The characteristic of this period is generally thought to be change – both towards expansive success and also to consolidation of power through increasing control of resources and the economy. For Mycenae and beyond, the current work at Petsas House has emphasized its importance for the study of pottery in LH IIIA2, stylistically and otherwise, as well as for the study of industrial installations and storage procedures in a settlement context (Papadimitriou and Petsas 1950, 203–233; Papadimitriou and Petsas 1951, 192–196 and pl. III; Iakovidis 2000, 63–66; Iakovidis 2001, 49–55; Iakovidis 2002, 18; Iakovidis 2003, 23–24; Iakovidis 2004–2006, forthcoming; Shelton 2007). The new excavations have also shown it to be important for our understanding of the relationship of the settlement to the palace, the use of Linear B and the organization of domestic space in the LH IIIA2 period. All of these factors add up to potential for major contribution to understanding the political economy of Mycenae at this time.

Although it may seem obvious, Petsas House is also significant as an example of architecture (Shelton in prep. b). Due to the extensive building programs of the following century, within the LH IIIB period, few remains of 14th century BC architecture have survived, even fewer with a reconstructible plan. Other examples of LH IIIA date at Mycenae include: stretches of the north and east fortifications (with old gates now demolished at northwest and northeast corners of the citadel); from the Palace – two walls, one behind the north wall of the great court along the south side of south corridor, and the “old wall” in the west terrace wall; and the fire damaged area and fill in the Pillar basement (Wace 1953, 17; French 2002, 57–61, 64–66; Iakovidis *et al.* 2003, 14–15). Other evidence consists only of pottery deposits, frescos below the Ramp House, and a cup from below the Artists’ Quarters. Outside of the citadel only the so-called “House of the Wine Merchant” dates to LH IIIA2 but was represented only by a storage area containing pithoi and 50 transport stirrup jars. The building itself, completely eradicated by the overbuilding of the Cyclopean Terrace Building, was apparently destroyed by fire at the end of the 14th century BC (French 2002, 64–66).

The Late Helladic IIIA changes on the citadel itself suggest a developing political economy, more so the changing relationships between citadel and settlement, or indeed the emphasis of a difference or distinction between life above and life below. Following the LH II period with its multiplicity of tholos tombs constructed at the same period as some type of center on the top of the acropolis hill, a force of skilled workers was carefully managed, rotating between monumental mortuary and civic construction (unless a greatly increased labor force in the form of slaves became available). The first palace on a terraced foundation was built very soon after the walls, using those walls to increase the potential building area. This relationship between the walls and the palace terrace is perhaps the first sign of organized town planning and a central authority with the means to implement it (French 2009).

Petsas House: A Case Study of Industrial and Economic Activity during the LH IIIA Period

The hillside known as Pezoulia, to the northwest of the citadel of Mycenae, was certainly inhabited and used for burials from late in the Middle Helladic period through Late Helladic II. The building currently under excavation, and first investigated in 1950 by Papadimitriou and Petsas (Papadimitriou and Petsas 1950, 203–233; Papadimitriou and Petsas 1951, 192–196 and pl. III), was constructed over an earlier LH II structure with substantially different

plan, towards the very end of LH II and the beginning of LH IIIA. The so-called Petsas House structure was apparently designed and used as a ceramic production and storage complex together with habitation of varying degrees.

The excavation was renewed beginning in 2000 by the Archaeological Society of Athens, under the general direction of Spyros Iakovidis (Iakovidis 2000, 63–66; Iakovidis 2001, 49–55; Iakovidis 2002, 18; Iakovidis 2003, 23–24; Iakovidis 2004–2006, forthcoming), and the work of each season since has revealed a structure or building complex of several levels set on and built into the slope of the hillside (Shelton in prep. b). Different methods of construction can be seen at each level of foundation alongside different uses of the building levels. There is mounting evidence, such as frescoes, that the building carried an upper storey, at least in part. The earliest understood use of the rooms excavated in the 1950s was storage, then little by little were revealed signs of production and elements of industrial complexity. Most recently in 2005, a purely domestic context was found – completing the triad of elements encountered in so many domestic/settlement contexts in the Bronze Age: habitation, production and storage.

The overall character and impression of Petsas House and its artifacts is pottery and the overwhelming dating evidence places its destruction towards the end of the LH IIIA2 period, conventionally dated to the late 14th century BC. Sherds recovered from the mudbrick upper walls indicate a construction date at the very end of LH II towards the start of LH IIIA1.

The complex nature of this structure exhibits a high level of organization and use for ceramic production, storage and distribution on a large scale. Petsas House is a multi-use or multi-task structure. It could have accommodated a significant number of people as residence or business. It is also possible that it was at least used, if not owned as well, by a single-family unit. Its size and complexity place it in a category of domestic structures at Mycenae known otherwise exclusively from the Late Helladic IIIB period, such as the “Ivory Houses” (Tournavitou 1995). Their place in the architectural hierarchy at Mycenae is still not entirely resolved. They are extra-palatial and extra-citadel, seem to be part of the greater settlement, although much more excavation is needed to truly understand their prominent positioning, and they are indeed larger, more architecturally complex, constructionally more sophisticated and functionally more diverse than other houses (for example, the Panagia Houses: Shear 1987). Their role in the economy of the center is also debated; they have been interpreted both as the abodes of independent entrepreneurs and as off-site production and storage facilities under palatial control (Tournavitou 1995; Shelmerdine 1997, 389–394). Petsas House indicates that there was likely an earlier occurrence of these structures in the settlement of Mycenae. The contemporary House of the Wine Merchant, as mentioned above, a little further southwest on the same slope is certainly another example of such a building (Wace 1953, 17; French 2002, 64–66).

Petsas House is a complex structure with a complex use. All indications point to builders and inhabitants of complex nature and existence. The architecture is very impressive and interesting in itself, as one of the few examples of architecture from LH IIIA2 on the Mainland and built and used within the height of the Mycenaean civilization. The walls were made of a wide rubble masonry socle set on bedrock with mudbrick upper parts and extensive timber framing. The organization of the functional space separates with corridor Ro, the two parallel rows of ground floor storage rooms on the west from some of the domestic areas to the east and industrial installation to the south. More elaborate domestic rooms with painted walls were located on the upper floor. No megaron suite of rooms has yet been identified, although clearly there is much still to uncover and much has

not survived. Characteristics of sophistication and even elite architecture include the extensive manipulation of the natural rock hillside, the multi-level construction, ashlar blocks used as corner stones and the covering of walls extensively with wall paintings.

The Petsas House building complex also extends further up slope to the east of the ground level rooms and incorporates in different ways a prominent outcropping of bedrock, up against which room Pi was built. At the northern extent of the investigated area, on what we call the “upper terrace” (= bedrock shelf), the bedrock was found to have been deeply excavated and cut back to create a room (Sigma) within the outcrop shelf. Much of this area was seriously disturbed by bothroi in the Hellenistic period, but enough has remained to show that here too the building extended at roughly (*ca.* 30 cm higher) the same “ground level” as most of the rooms to the west of it. This level was of course artificially achieved through much intensive labor rather than minor manipulation of the natural slope terrain. Based on the few artifacts recovered and the walls of colored plaster, room Sigma was part of the domestic use of the structure. Additional evidence of this is the small shallow pit in the bedrock under floor level for an infant burial. Only two tiny fragments of bone were recovered and the date of the ceramics suggests that the burial occurred soon after the construction of the building in LH IIIA1, perhaps as much as three quarters of a century before the final destruction of the building, many generations later. Within the pit were uncovered three whole vases: conical cup, miniature conical cup with linear decoration and an exceptional miniature goblet with ivy decoration fashioned with a built in lid and strained/pierced mouthpiece at right angle to the ring-handle. Along with the vases were beads of gold, spherical and ivy-leaf shaped with granulation, lapis lazuli and blue glass.

The remaining areas of the building can be characterized as industrial and/or commercial in use. First of all, there is the entrance to the complex, Gamma, equipped with a wide stone staircase and paving-slab ramp for easy and efficient access in and out of the structure, where the last shipment of goods, figurines and vases, were caught in the destruction of the building. I believe that the main potting area may have been in room Pi in association with the large stone slab bench or table in the northeast corner and near a convenient and necessary water source – a well in the southern part of the room. The most unusual feature of the “upper terrace” and Petsas House in general is a large rectangular cutting in the bedrock shelf at the south end of the building. It measures 2.5 m by 3.75 m and is a little over 1 m deep, except in the northwest corner where the original floor is collapsed into an open cavity below (for a discussion of the excavation of this cavity and its possible use as a shaft grave of MH III/LH I date followed by a domestic bothros during the life of the house, see Iakovidis 2001, 49–55; French and Shelton 2005, 180). The exact function of this area is uncertain, but the location and nature of the cutting suggest that it was part of the industrial installation and may indeed have been used for the processing of potting clays.

The well in the south end of Room Pi was encountered in the 2001 season, cut vertically out of the bedrock, first as a circle and then for most of its depth as a rectangle.³ Explored at further depth during the ensuing seasons, the deposit continues through the end of 2006 to more than 10.25 m depth (approximate volume at current depth is 22.65 m³) (Trusty 2006) to be characterized by a fill of red-brown soil together with fragments of charcoal, mudbrick and clay, the result of a single extended event related to the destruction of the building during which was deposited a vast quantity of pottery (300+ whole vases, >500 restorable vases) and other small finds of ceramic, stone and glass.⁴ The sherd and artifact density represents the reciprocal density of material in storage and use at the time of destruction and was deposited here in an attempt to clear out the destruction debris presumably to recover

the use of the structure.

The artifacts recovered from Petsas House are overwhelming in quantity and quality. Such a rich corpus of pottery and figurines reveal an amazing amount about the style, technology and chronology of ceramic production. Recognized since its initial discovery, one of the primary uses of the building was for the storage of mass quantities of pottery. Most clearly and completely excavated and recorded was storeroom Alpha that contained approximately 500 vases, over 90% of them decorated fine ware, all with a strong piriform profile. The pots are of very high quality and could reflect the work of a single potter, a specialist in this characteristic shape of LH IIIA 2. There are both closed and open vessels, and a few undecorated of the analogous shapes. There are a few pieces that seem to be of slightly less precision and are produced in inferior quality clay. The decorative patterns on these are simpler and fewer. Overall in storeroom Alpha, the decorative motives and their execution suggest a few painters working on the pots of a single potter and perhaps one or two assistants. Extreme organization is the picture with pots arranged on shelves around three sides of the room organized by shape and size. The vases were packed in, which seems to suggest limited space, although that doesn't seem necessary in such a large structure. More likely that the material was organized in this manner by shape and size on purpose, either as a form of inventory control, for ease of retrieval or simply personal preference. So we very likely have in storeroom Alpha the product of a master potter and his or her assistants.

The organization of the pottery of course could be a matter of shape/function. This seems to be the case in other rooms where predominantly undecorated vessels were stored, especially open shapes – kylikes and bowls of vast size range. Some are similar enough in execution to see further specialist production, while the huge number of rather carelessly produced carinated kylikes could have been produced by any number of individuals in a range of skill levels – precise shaping was not the point. The proportion of undecorated to decorated vases and of kylikes to other shapes matches well with proportions observed culture-wide during this period (more about this below). It is highly unlikely that all of these vases were intended for use in this building itself although there may have been facilities for group feasting on the upper floor that have not survived. The large number of fine ware storage vessels would certainly be redundant all in this same closed and close context. The vases were new/unused and should reflect the “cottage” industry of this group of individuals – whether a family of craftsmen or one of traditional make-up. This reconstruction should remain valid regardless of the level of control exerted by a central authority. The question remains whether ceramic production in the settlement of a palatial center requires the reconstruction of either an entirely independent operation and/or one entirely under palatial control (Wiener 2006, 4).

At the end of the day, pots are never exclusively a palatial concern – everyone needs them, unlike rarer and more specialized objects such as bronze arms or imported beads; the level and nature of pottery consumption, however, should be vastly different (Whitelaw 2001; Knappett 2001; Galaty 1999, 2007 and paper in this volume; see also Costin 1991 and Dabney 1997). We should be able to recognize local versus palatial economic action, shouldn't we? This is also part and parcel of the levels of restricted versus free circulation of wealth. Pots in their simplicity actually complicate matters and indeed are harder to recognize in the palatial economy (for instance the case of potters/pottery in the Linear B records or rather lack thereof) (Palaima 1997; Knappett 2001, 85–87; Whitelaw 2001, 71–74) and are not traditionally connected with prestige materials or imported goods (Galaty 2007, 49–51). In this area of craft production, the importance of reciprocity and markets is

difficult to understand. In completely independent production we would expect many individuals to produce limited quantities and for there to be a great variety of product (as seems to be the case through LH II) while the palace controlled enterprise might be a more factory-like production of limited shape and design range, often produced by specialists in an assembly line process. There is a preferred cup shape, one for storage of liquids, another for pouring – the result a more limited range and more streamlined production values (*i.e.* the characteristics of LH IIIB). Mass production necessary to meet greatly expanded demand would itself have required increased standardization of activity and division of labor; while independent potters were responsible for all stages of pot production – later various stages may have been in different hands (Wiener 2006, 12). The output of Petsas House and more generally that of the LH IIIA2 period falls somewhere in between: there is mass production, especially of a small range of shapes that must be significant to the needs of the culture or at least an interested segment of it. There continues alongside, the production of individual and highly original pieces often requiring great output of labor; there are even new experimental shapes complimenting older traditional ones, rather than simply replacing them. The range of cup shapes produced in LH IIIA2 is striking (Mountjoy 1986, 67, 84–92; Mountjoy 1993), with a number of new profiles and bowl depths (with a variety of handle numbers and positions) added to the traditional corpus of deep and shallow. The pots are mass-produced and quite standardized, but they also still exhibit great variety and artistry; factory output but still signs of a specialist (at Petsas House this can clearly be seen in storeroom Alpha). Also of note were some coarser wares produced here,⁵ especially two varieties of cooking wares: a rough and a gritty, the latter similar in general clay composition and shapes to the traditional cooking wares, often thought to have been produced almost exclusively on Aigina. These are not Aiginetan, however, lacking the characteristic gold mica and black crystalline inclusions (W. Gauss, personal communication, 2006). These pieces represent a local production using materials brought in for their specialized qualities and a level of specialization seen in combination with divergent clay types and functional ranges (Galaty 1999, 2007 and in this volume for the opposite scenario at Pylos in IIIB). “Any indication of specialization, local and regional, suggesting an emerging or developed division of labor, suggests in turn an exchange of goods and services” (Sjöberg 1995, 27). What is being exchanged? Who is responsible for the exchange? I would suggest that the evidence recovered from Petsas House indicates an independent, cottage industry that is in the process of being absorbed into the palatial sphere, during and after the rise of the palace – so why? What does the palace need from the ceramic craftsman? Is it for its own use, is it conspicuous consumption, conspicuous display, trade – internal, and/or external? Yes, probably to all of the above in some way at some time, but there is more to it, of course.

The ceramic products at Petsas House are important chronologically and economically and show increasing palatial interest if not control at this period. This can be seen in three important vase types that were made in great numbers, at least in LH IIIA2. I would argue that all three are “palatially motivated” shapes: kylikes, conical cups, and stirrup jars.⁶

Kylikes

Kylikes (Fig. 10.3) are used for the consumption of liquid, probably wine, but most importantly for our purposes, for feasting and ritual (Wright 2004a; Mountjoy 1986, 204–205; Mountjoy 1993, 63–64). Depending on size, the kylix can be either a personal vase used by an individual or a group consumption vessel, passed among participants. The shape was first developed in LH IIIA and quickly becomes one of the most numerous consumed

shapes among fineware (Galaty 1999 and 2007). It is not an entirely new shape, but rather develops from the LH II and IIIA1 goblet, especially in decorated versions: polished and painted. The decorated kylikes like the goblet before them are more individual in production and more exclusive in use through at least early LH IIIB. The oversized kylikes and stemmed bowls, again like goblets of LH II, were suitable for dignitaries or for shared consumption among feast participants (Dabney, Halstead and Thomas 2004, 83; Wright 2004b, 98–100). This use could be an elite desire as well as a palace need. On the other hand, the angular or carinated kylix is an entirely new shape in LH IIIA and also seems to represent a class of fineware ceramic production that is truly industrial in nature: mass numbers, basic characteristics without necessary consistent clay color or surface finishing, with very little evidence of quality control or even a desire for it. These, a rounded bowl variety with two-handles and the carinated bowl version to a lesser extent are truly throw-aways. It is often hard to imagine the production of these barely functional and sloppy vases in the same place and by the same hands as the carefully produced decorated versions. Here we may have assembly line production with little need for mastery. The completion of large numbers seems to have been the goal, they were counted and probably accounted for. Ultimately there functional quality was not primary – many do not stand and a surprising number (including some in the Palace of Nestor’s pantries) have holes in them (Hruby 2006). Even without holes, they are the least impermeable of the kylikes – those with slip and/or polish actually being better drinking vessels.

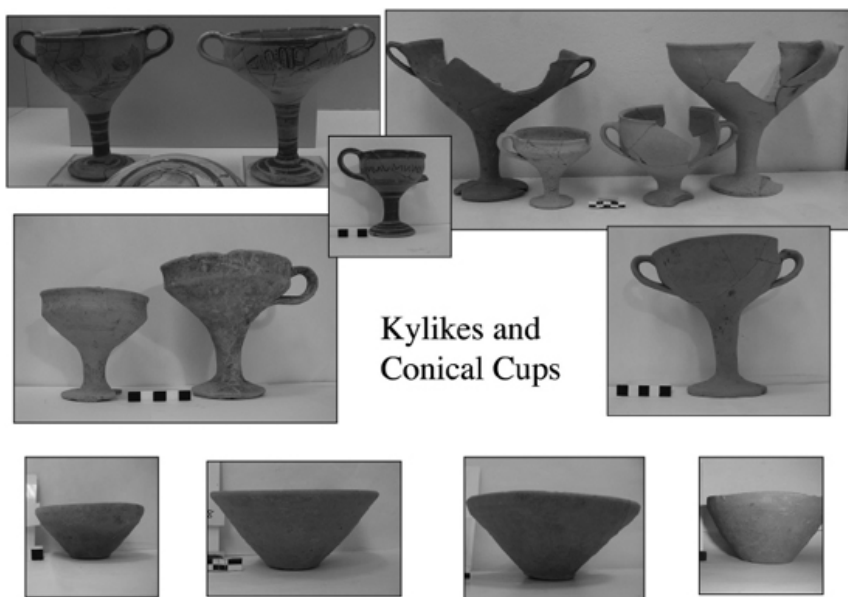


Figure 10.3. Kylikes and conical cups (LH IIIA 2), Petsas House, Apotheke A and well deposit, Room II.

These vases were apparently needed in many contexts: they are all over settlements of various types, often in tombs – both from burial deposits and ritual use, and are a prevalent vessel type among religious contexts such as the Cult Center (Moore and Tylour 1999, 32–45). It is difficult to imagine that individual consumers would have needed such high numbers of vases, either in use on a single occasion (the Mycenaean “Dixie cup”) or in

store, while it is possible and even likely that a central authority that regulated ritual and custom among the living and the dead and even curried favor of its constituents through feasting and public ritual would have required a huge and steady supply of this type of disposable vessel.⁷

Mycenaean terracotta figurines may also be related to this trend; an interesting prospect in light of the context of LH IIIA and the production of ceramics at Petsas House. At roughly the same time as the development of the kylix, again especially the rough-surfaced undecorated versions, in early LH IIIA, the characteristic figurines of women and bovines are developed and quickly become relatively standardized in production, abbreviated in form and widespread in use among a variety of contexts (French 1971, 107–108, 174–177) – two specifically relevant here are religious deposits/cult areas and chamber tombs – just like the kylikes. Lo and behold! – at the base of the entrance ramp in Gamma at the time of destruction was a shipment of ceramics: carinated kylikes, a few carinated bowls, three pictorial stirrup jars in three relative scales and at least 186 figurines of female, bovine, combination and specialized animate and inanimate shapes (Papadimitriou and Petsas 1951, 194–195; Shelton in prep. a). It may be a coincidence but I think the parallel development and use of kylikes and figurines represents a standardization and organization of ritual that bespeaks a common, central authority, one that at Mycenae will literally co-opt the areas of cult. The Cult Center throughout LH IIIA operated outside the “walls” of the citadel and for a number of reasons seems to be more publicly accessible, physically and ritually. Another destination for the figurines and much of this pottery was tombs – especially chamber tombs, the burials of which during LH IIIA are not as unique and wealthy as LH II, but much more so than in LH IIIB.

An interesting comparison for the Petsas kylikes, of relative quantity and potential consumption context are of course the 1000s of plain kylikes in several “pantries” at the Palace of Nestor at Pylos (Galaty 2007; Whitelaw 2001, 52–62; Hruby 2006). Although a century later in date and obviously in a direct palatial context, the existence of these kylix shapes, fabric types and production quality in such large numbers is a clear indicator of the importance of the shape and the bulk necessary to “have on hand” at any one time for use by or for the palace (Whitelaw 2001, 74–79).

Another interesting comparison comes from the results of Galaty’s and Hruby’s studies (Galaty 2007 and Hruby 2006), which indicate one potter is responsible for all the fine wares in pantries 18–22, more than 6500 vases. The quantity of production is certainly comparable to the projected ceramic output at Petsas House and allows for the possible reconstruction of a single potter’s workshop and the numbers of vases made and stored in an intensive production strategy. As Galaty has observed (Galaty 2007, 76–77) and discusses more fully in this volume, coarse wares at Pylos were more diversely produced at several workshops. He sees this separation and specialization as a by-product of the Pylian state and regional economy in LH IIIB and the resulting increased opportunities for commercialization (Galaty 1999, 49). The “royal” potter of Pylos may have been attached to the palace and/or exclusively producing these necessary fine ware products (Palaima 1997, 410–411; Hruby 2006; Wiener 2007; for various possible relationships between artisans and palace see Tournavitou 1997, 29–41), while the potter at Petsas House is only associated with the palace, producing needed shapes and styles, perhaps by commission or conscription, alongside coarse wares and other shapes needed by the wider community.

Conical Cups

Conical cups (Fig. 10.3) are another case in point. Completely separate from the Minoan

conical cup, the Mycenaean version is less frequently found in deposits that could be interpreted religiously, and are more often found among settlement material, domestic contexts and in places where a plethora of consumed ceramics are found – especially undecorated. They are usually much better made than the earlier Minoan versions, a very few are even painted, and seem to be much more standardized in production values such as clays, surface treatment, profiles (with a little variety) and most importantly volume (French and Tomlinson 1999, 259–266). The vast majority can hold around 250 ml of grain or around one cup in standard measurement. This shape was mass-produced through LH IIIA, at Petsas House for example, and very likely used for the distribution of rations. Again there would certainly be palatial interest in the mass and steady production of the shape, especially if handed out on a very regular, even daily basis. A few of these cups at Petsas House were also in use – some as lamps (as were also a few FS 267s) and others to hold pigments (usually red) most likely for ceramic production. It would be very nice to know if any of the hundreds of cups came to Petsas House with a ration quotient for those working at least partially in the interest of the center. Another product and its pottery container that came into Petsas House was oil in the usual course ware stirrup jar – several fragments having been found among the destruction debris and although not yet tested for source, are identical to the vases of the House of the Wine Merchant and were certainly made on Crete (Catling *et al.* 1980, 92–93; Haskell 1981, 225–238). This could represent oil for supply, payment or exchange.

Stirrup Jars

Last but by no means least is the stirrup jar (Fig. 10.4). This shape was “made Mycenaean” and put into full production in LH IIIA2 after a hiatus from a brief use of the Minoan or Minoanizing form (FS 169) in LH IIA (Mountjoy 1986, 30–31, 67 and 203; Mountjoy 1993, 71). The earlier shape was not accepted or incorporated into the standard range and quickly disappears. It is reintroduced more than a century later in a variety of shapes all based on the same major characteristics. These containers were used for oil, often scented and wine – two liquids certainly controlled by the palace. They also play a very obvious and prolific role in trade, especially overseas, exhibited by the large numbers recovered in foreign contexts (Mountjoy 1986, 163–177; Hankey 1997, 193–218; Halstead 2007, 68–70). They were primarily traded for the product they contained, but ultimately I think for the packaging too. A number of pieces were kept as heirlooms in use for a very long time. Their high production quality is in direct relation both to their potential market appeal/value and to the strict parameters of volume, strength *etc.* At Petsas House, the stirrup jar was produced in large numbers – almost mass-produced with more than 128 small scale piriform examples alone in only room Alpha, together with numerous larger capacity examples (Papadimitriou and Petsas 1950, 222–224). One obvious *raison d’être* of the palatial system must have been the regularization of trade, especially cross-cultural exchange. The manipulation of foreign trade and the mediation of contact with the outside world offer another means to sociopolitical control.

International Elements

Another vase style of international importance, but created in smaller numbers and along somewhat more original lines, is pictorial – especially the tall-necked amphoroid krater – so often bedecked with chariot scenes and usually consumed in the Cypriot market for burial customs and maybe ritual (Mountjoy 1986, 73–74, 170–174; Schallin 1997, 73–88). We find that the Petsas potters produced examples of pictorial for home and abroad, each

tailored in shape to the particular market preference (Vermeule and Karageorghis 1982, 28). The LH IIIA period abroad recognizes Mycenaean and their wares in real numbers – Miletus, for example during the early part of LH IIIA1 becomes Mycenaean with a significant 98% of its pottery being Helladic (Niemeier 1997, 347). Foreign material continues to appear on the Mainland, but in smaller numbers and more restricted contexts.



Figure 10.4. Fine ware stirrup jars (LH IIIA 2), Petsas House, Apotheke A.

Canaanite jars were apparently also brought to Petsas House and may have contained other utilized materials or supplies given in trade for their wares. Palatial or independent merchant? It is difficult to say; the small number of examples could mean a rare occurrence, but the jars would be used and discarded, not stored like their own products. In this line of investigation of particular interest is the recovery in 2005 of a fragmentary Egyptian faience plaque with the cartouche of New Kingdom pharaoh Amenhotep III, similar to others found in the citadel of Mycenae (Cline 1987; Cline 1990, 200–212; Phillips 2007), but the first from a 14th century BC context. On the small fragment is clearly preserved the hieroglyphic sign “Ra,” the last or lowest element of his prenomen or official name: “Neb-Maat-Ra.” One would assume that the inhabitants of Petsas House must have been at least in part elite, certainly to access and participate in the exchange of commodities transported over long distances and across cultural boundaries. But is this not something that a centralized palatial authority could and would provide, especially if they were in reality active consumers of a necessary but independent ceramic producer?

Linear B

Finally, there is the case of Linear B. Many have commented on the marked contrast between the few references to pottery and potters in the palatial Linear B records and the amount of pottery actually found (Palaima 1997; Galaty 2007 and paper in this volume; Whitelaw 2001, 71–74; Knappett 2001, 85–89; Wiener 2007). The existence though of any mention does imply some palatial interest (Wiener 2007). Linear B tablets from Mycenae and Pylos refer to only five potters in all and these potters were unlikely to have received anything from the palace requiring scribal notation – or were vessels made locally appropriate items for the collection of taxes recorded in the tablets? (Wiener 2006, 6–7 and 2007; Palaima 1997, 410–411). The Petsas tablets (Shelton 2006) suggest some level of palatial interest, unless we leave open the possibility of elite and/or merchant literacy. “Apodosi” is a delivery – from the palace? Or is this a shipping invoice? What about provisions, personnel? These tablets are currently the earliest known examples of written administration on the mainland and it is still important to emphasize the use of Linear B in

LH IIIA2, at least. Their discovery among the ruins of a ceramic production and storage facility fuels the imagination further and demands some acceptance of palatial interest, if not control.

Great Destruction + Great Loss Brings Change

The well in Room Pi has been one of our most interesting riddles. It has also been a convincing witness to the severity of the destruction that befell Petsas House late in LH IIIA2. Elsewhere in the building, we find walls that have jumped off of their foundation and foundations that have been knocked off of their line. Fires started in many areas – some reaching a high enough heat to not only bake collapsing mudbrick and a few tablets, but to vitrify the fabric of a tripod cooking pot that exploded across Room Sigma. The destruction was total – the storage rooms spilled their breakable contents onto the floor and the upper floor rooms came crashing down through the floors and down the slope into the lower level. The thousands of pots and other objects together with segments of fresco-covered walls were deposited in the well in an attempt to clear out the destruction debris, presumably to recover the use of the structure. This tells us much about the end of life at Petsas rather than clarifying for us the position of the individuals and the relationship of their work to the political economy at Mycenae.

The well deposit, however, represents a very labor intensive and valiant effort to recover what was lost in some part. There was an attempt to dig out and reclaim this structure even though the products themselves were not salvageable and it was not until the truly overwhelming nature of recovery became clear that the effort was abandoned and the home with it. The clean up effort could be interpreted as a palatial mandate to recover its interests no matter how futile, but I think we should interpret more clearly the abandonment of the structure and the complete lack of rebuilding as evidence for private ownership and individual enterprise, with whatever degree of palatial interest we would like to imagine. The recovery was too much of an undertaking and yet even though the area could have been “bulldozed” over and rebuilt on a mighty terrace, it was not.

The destruction of Petsas House was not an entirely local event; evidence for major disruption is found all over Mycenae, under the extensive later building remains (Tournavitou 1995, 1–68; French 2002, 57–61; Iakovidis *et al.* 2003, 14–15; Shelton in prep. b). Elsewhere, mostly pottery and fresco fragments are found in terrace fill, indicating both extensive occupation on the citadel and over the slopes of the settlement during LH IIIA, and a probable catastrophic event with fires in and out of the citadel. This event brings in the following period’s, LH IIIB, changes in architecture at the same time that life at Mycenae remains essentially the same with a sophisticated palatial administration literate in Linear B and large architectural complexes with habitation and industry in the settlement. There also seems to be a tightening up of control. Something happened to cause a great deal of destruction. Material culture changed; the change in stylistic ceramic period from LH IIIA2 to IIIB is a real division, for example, and a tremendous amount of construction was necessary, especially at Mycenae. I would suggest that it is something catastrophic – an earthquake most probably – and that the changing methods of construction employed in many of the new buildings indicate a desire to build in a different manner – perhaps more anti-seismic (Shelton in prep. b). Much of the building may indeed have been programmatic and partially if not wholly underwritten by the palace – to secure its interests and favors from the populous. This also manifests through ever-increasing indications of centralized authority such as the changes in burial display and the construction of the mighty citadel bringing large stores of production as well as the religious center physically within its

realm. What seems “overwhelming” through the 13th century BC may have developed out of need or opportunity following great loss; hyper organization out of a sense of chaos. This was only, though, a culmination of over a century’s developing political economy in this direction and it was certainly not the solution, as before long we witness political collapse as well as physical collapse – one that is not recoverable in many places and only slightly better at Mycenae.

Bottom line – there must have been pots – there were always pots. The phenomenon of Petsas House and its loss underlines the likely existence of other such installations somewhere at Mycenae, still lying covered and undiscovered; an opportunity to see what the people of Petsas house started.

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Notes

- 1 Papers in this volume clearly indicate this, especially papers by Parkinson and Driessen. Nakassis and Galaty are also illustrative of the variation, in addition to Voutsaki and Killen 2001.
- 2 I refer here to the Late Helladic (LH) IIIA and IIIB periods as the height of Mycenaean culture, economy and political structure. More specifically, I consider the LH IIIA2 period the pinnacle with the following IIIB period showing some indications of initial decline – cf. de Fidio 2001, 24; French 2002, 135–136 and 2004.
- 3 The cutting is very much like that of the shaft graves of LH II; an estimate of the necessary labor output would be three men for less than 10 days (Trusty 2006).
- 4 The full diameter of the circular opening is: masonry – 1.86 m, bedrock – 1.46 m. 7 m of fill had been removed to the end of 2004. The cutting in the bedrock is clear and regular – cut in a rectangular shaft beginning at a depth of app. 2.50 m below the circular opening at ground level. The N–S walls have a length of 1.42–1.50 m and the E–W walls are 1.10 m long.
- 5 This seems to be distinctly different from the situation at Pylos/Messinia, see Galaty in this

volume.

There are potentially many more new or popular shapes that could be discussed as evidence of this phenomenon. I have selected these three because of their high incidence at Petsas House and for what they represent. An interesting parallel at the beginning of the Old Palace period has been remarked on by Wiener 2006, 5; also Wright 2004b, 91–92. Knappett 2001, 84–85 argues convincingly that pottery, especially kylikes can be “politically charged” in certain consumption contexts and although this symbolic weight may not be applied at the point of production, they would in their prescribed and necessary pattern of use. See also Galaty 1999a, 1999b; Halstead 1999, 39–40; Whitelaw 2001; Dabney, Halstead and Thomas 2004.

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LIVING FROM POTS? CERAMIC PERSPECTIVES ON THE ECONOMIES OF PREPALATIAL CRETE

Peter M. Day, Maria Relaki and Simona Todaro

Introduction

The notion of *political economy* seems inexorably linked with the emergence of societal complexity (Brumfiel and Earle 1987a; Cobb 1993; Earle 2002; Patterson 2005; Roseberry 1988, 44; Stein 1998), and perhaps there lies the reason why a discussion of the political economy of Minoan Prepalatial society generally has been shunned (but see Haggis 1999). The Prepalatial has long been considered only a prelude to social complexity (*e.g.*, Renfrew 1972; Cherry 1983; Warren 1987; Branigan 1988), while the intimate association of political economy with a centralized system of socio-political organisation made consideration of Early Bronze Age material within this framework rather difficult. Hence, although the complexity of Prepalatial society is widely recognised by most scholarship today, the lack of a more sophisticated view of political economy has largely limited discussion to the standard centralised vs. non-centralised dilemma.

In this paper we argue that such difficulties also emanate in part from the way the organisation of craft production is understood in existing models of political economy. Identifying the organisation of production from archaeological remains is a matter fraught with problems in the best of cases, and even more so in the context of the Early Minoan period, where direct evidence for craft production is strikingly rare. However, in our case there are two factors that mitigate against these difficulties: the application of scientific analysis and the study of technological practice. On the one hand, the proliferation of scientific analysis applied to archaeological materials has built a substantial body of knowledge in recent years, allowing a clearer perspective on the issues of production, even in the absence of direct evidence. On the other, our long engagement with the study of technological practice has underlined a potential flaw in the ways in which craft production is conceptualised, namely that such studies are very often deprived of historical context. In the effort to identify, classify and assess all the diverse components and parameters of the productive process, research tends to extract craft production from its historical background and examine it in a vacuum. Without denying the value of generalising, at least at a basic level, we suggest that this a-historical view of craft production has created several dead-ends in our understanding of this socio-political and economic process and its role within the political economy of Prepalatial society.

Central to such understandings of production is the notion of *specialization*. Although the extensive body of literature on this issue encompasses a range of varied and often contradictory views of the means, aims and types of specialization, a common theme binds all such approaches together: the seemingly inevitable connection of production specialization with labour division and the concomitant kinds of societal organisation deriving from it. Without underestimating the importance of the division of labour as a structuring principle of the productive process, we have, nevertheless, some trouble with the

monolithic way it is portrayed, as well as with the inevitability of its sociopolitical implications, *i.e.* the resulting types of social organization.

Our paper focuses on ceramic technology, for several reasons. Firstly ceramics are abundant and their long presence in the archaeological record of Crete allows us to trace the technological development of the craft since the very beginning. Furthermore, a significant amount of typological and, most importantly, analytical studies allow us to reconstruct with considerable precision not only the patterns of production, but also the processes and contexts of ceramic consumption and exchange. When this information is integrated with what we know of Early Bronze Age social practices it provides an illuminating new perspective on Prepalatial economies.

A Political Economy of the Prepalatial?

The defining element of political economy is the intimate connection presumed between the economy and political systems of organisation:

“Political economy is the material flows of goods and labour through a society, channelled to create wealth and to finance institutions of rule” (Earle 2002, 1).

Earle (2002, 9) specifically identifies two distinct types of economy: *subsistence economy*, encompassing the various ways by which “households maintain themselves through everyday activities,” and *political economy*, involving the mobilization and allocation of surpluses in order to finance political institutions. Most scholars seem to agree on the importance of surpluses for the existence and workings of political economy, although they may envision different types of surpluses and varied ways of mobilizing them (Brumfiel and Earle 1987b, 3; Cobb 1993, 46; Stanish 2004, 16). Indeed we have no problem in accepting the primordial significance of surpluses (either in the form of material resources, or as labour and services) as a way of financing and maintaining political institutions.

The problems with these definitions begin with the introduction of a largely artificial division between “practical”/subsistence and “symbolic”/political economy, and the underlying assumption that political economy results from and reflects social complexity. In the first case, in many contexts, including our case study, it proves very difficult to distinguish between economy and production directed towards practical purposes and that aimed towards generating prestige and status (cf. Hayden 1998). To use an example that we will explore further in our discussion, how are we to understand the production of ceramics in the Prepalatial period, when these items are used in strictly “utilitarian”/practical ways (*i.e.* to store, cook and serve) at the same time as being implicated in prodigious symbolic strategies, such as their use in funerary contexts and conspicuous feasting? In other words, is it possible to distinguish between the economic/practical and political/symbolic significance of ceramic production within Prepalatial society? If our examination of the Prepalatial economy is conducted outside its specific cultural and historical framework, such an understanding of its processes and patterns is bound to be incomplete.

The second point of contention is the link between patterns of labour division and levels of social complexity. As Earle (2002, 10) claims, “the division of labour within a society is a fundamental description of its complexity.” There is no doubt that the patterns of labour organisation in a prehistoric, non-market society will be very different from labour divisions encountered in the Western, capitalist contexts of the recent past and the present (see also Earle 2002, 137). However, to claim that divisions of labour in such societies are inherently simpler rather constitutes a misconception. Let us suppose that labour division in such undifferentiated societies is organised according to kinship structures (Cobb 1993, 46–49;

Haggis 1999, 65–70); would this make the structuring of such relationships any simpler? On the contrary, and especially in the case of small-scale societies, the articulation of obligations and alliances within such a system would be very intricate for fear of causing offence or disrespect (Cohen 1985). For example, scheduling conflicts during the production year, that can be resolved by borrowing labour within the lineage or extended kin, may prove very difficult to overcome if there is no clear ruling as to whether the male or female kin line is supposed to be given priority. It transpires, therefore, that the division of labour, as much as it may have a profound effect on the way a society is organised, is also deeply embedded in a specific cultural and historical context and is not a universal and constant feature of the organisation of production. Furthermore, it is possible that different activities are subject to different patterns of labour allocation or that labour divisions change periodically to reflect unexpected stresses or differentiated needs. Ignoring these temporal and contextual parameters constitutes a central flaw of approaches that envision specialization of production as essentially grounded in labour division (but more on this below).

Finally, the standard understandings of political economy as a system requiring and inducing centralised control over the production and (re)distribution of surpluses (Earle 2002, 9; Renfrew 1972; Halstead and O'Shea 1982, 93) has had a further, more specific implication for the study of Prepalatial Cretan society. The identification of a "central authority" within the Early Bronze Age has proven a very elusive task, despite the ongoing debate as to whether some aspects of the society might have been characterised by varied levels of centralised decision-making (e.g. Schoep 1999; this volume; Wilson 1994, 42; Sbonias 1999; Haggis 1999; Schoep and Knappett 2004; cf. Cherry 1983; Whitelaw 1983). Therefore any consideration of political economy proper seems restricted to the later, Palatial phases where the indications are much stronger for at least some level of centralisation in Minoan society. Is the answer to continue looking until some form of centralisation becomes apparent, thus opening the way for a discussion of Prepalatial political economy? Or should we, perhaps, devote our efforts to exploring alternative conceptualisations of political authority that, being more firmly grounded within specific socio-historical conditions, would allow a more fruitful investigation of the patterns and processes of political economy?

Our recent exploration of the organisation of Protopalatial ceramic production in the Mesara (Day, Relaki, and Faber 2006) has highlighted the fact that, even in the case of a relatively centralised political authority, the control of craft production might not necessarily follow suit. This seems to necessitate a re-examination of the link between the organisation of production and the patterns of social organisation. On the other hand, there exist a multitude of forms by which political authority is manifested and operationalised, suggesting that there are also a number of different ways in which mobilization of resources can be attained, apart from institutionalised domination and control of the means of production (Cobb 1993, 79; Stanish 2004). However, it must be stressed yet again that the effectiveness of this alternative understanding of political institutions and their interaction with socio-economic processes depends entirely on placing our approach within concrete historical settings and contexts.

As Cobb has argued "political economy involves *historical relations*, not universal categories, of power and inequality" (1993, 79, emphasis added). With this in mind we would like to explore the significance of craft specialization in understanding the political economies of Prepalatial Crete.

Some (More) Thoughts on Specialization

Craft specialization has been integral to archaeological approaches that seek to relate the organisation of production with political economy precisely because, as we explained earlier, specialization appears intimately linked with the division of labour (*e.g.* Brumfiel and Earle 1987b, 5; Clark and Parry 1990; Cobb 1993, 65; Costin 1991, 3–4; 2004, 190; Earle 2002, 127; Rice 1981; Schortman and Urban 2004; Stein 1998; Patterson 2005). It has also largely been understood as a primary means by which elite power can be established and maintained (Costin 1991; Brumfiel and Earle 1987b; Earle 2002; Helms 1993; Peregrine 1991; Stein 1996). There exists a variety of definitions and theoretical treatments of specialization (Brumfiel and Earle 1987a; Costin 1991; Rice 1981; 1991; Earle 2002), and a very extensive literature pertaining specifically to ceramic specialised production (Arnold 2000; Costin and Hagstrum 1995; Hagstrum 1985; Peacock 1982; Rice 1981; Stark 1991; van der Leeuw 1984). In light of this over-exposure of specialization in the literature what has this present discussion to offer?

Although these approaches have tried to emphasize the diverse types of and the varied factors leading to craft specialization, when it comes to its role within the wider organisation of society, the discussion concentrates almost entirely on demonstrating how specialization is instrumental to the development of inequality and social hierarchy. The main premise of models that describe how specialization is brought to bear upon the creation of elites can be summarized as follows: in the “*prestige goods*” model, specialization develops in association with *political* processes geared towards the accumulation of wealth, whereby either the specialist production and distribution are directly under the sponsorship (and control) of the elites, or the elites control exchanges and/or access to exotic resources (Brumfiel and Earle 1987b; Earle 2002, 127–161; Schortman and Urban 2004, 189–192; Helms 1993). In the *commercial/economic growth models*, independent (as opposed to “attached” to a political authority) specialization develops in part as a result of environmental and demographic factors and almost always to fulfil utilitarian, *economic* needs of intensification and efficiency (Earle 2002, 129–144; Costin 1991, 7–12 for discussion; application of this model in the Aegean, Renfrew 1972; Branigan 1983; Cherry 1986). This latter explanation of specialization has been criticised for relying extensively on the development of market relations characteristic of modern capitalist settings and hence non-applicable to many prehistoric societies (Earle 2002, 137).

Two issues require some attention regarding these models: although the commercial model indeed fails to attribute to specialization the political weight that it can muster, the artificial distinction between economic/utilitarian and political/prestige specialization mirrors the division between “subsistence” and “political economy” and makes it practically impossible to recognize any political role in non-attached craft specialization. By consequence, in contexts (such as, for example, Prepalatial Crete) where either elite formation is under way, or the elites are more fluid and manifest themselves in less overt ways, this view of specialization proves entirely irrelevant. On the other hand, all these contrasting models share an implicit understanding of the value placed on craft goods, which appears to be rather universal and unquestioned (Barrett and Damilati 2004). In other words, craft goods seem to be *inherently valuable* without any justification as to how this value is constituted.

Several questions arise from these theoretical formulations: in the first instance, is specialization politically significant *only* when it is attached? In this sense, we return to the initial problem: can we speak of political economy in societies where political authority is not institutionalised and the means of production are not centrally controlled? Secondly, if

craft goods are always at the centre of contention (either as economic/practical means or as prestige artefacts), what is it that makes them so desirable? How is the value of craft goods determined? Although all the models stress the importance of exchange and consumption in understanding production, they nevertheless often fail to discuss the specific role that exchange and consumption play in the ascription of value to craft goods. Finally, if craft goods are so valuable, *why* and, perhaps more importantly, *how* would other people be allowed to benefit from an association with craft goods and not their producers? Would elites consist entirely of craftspeople?

Many scholars (Earle 2002, 127; Costin 1991, 3–4; Rice 1981; 1991) have emphasized that specialization implies exchange and the “rights of alienation,” meaning that producers can trade their products for payment. Even if we accept that the right of alienation constitutes an inherent element of specialization, we would still have to appreciate that such rights are deeply embedded in the politics of value ascription. Such politics would determine which goods can be exchanged for what (or at all – see Weiner 1992), how often, under what circumstances and for what purposes. Although all the approaches recognize that these rights might be subjected to social constraints, they rarely explore these restrictions as mitigating factors in the development and deployment of specialization in a particular historical context (but see Costin 2004).

So are the current models of specialization adequate for exploring these issues, when they are heavily reliant on the division of labour and socio-political centralisation? We argue not. Instead, we would like to draw attention to two facets of the process of specialization that are widely acknowledged, but barely given the attention they require: *time* and *skill*. Usually, it is the spatial dimension of specialization that receives most attention. We would like instead to focus on the temporal elements of this process by looking at the contexts and requirements of consumption and the temporal distinctions emanating from exchange patterns. In this way, we believe, a more insightful contribution can be made to the standard debate of part-time versus full-time specialization. Furthermore, by emphasizing skill and technical expertise as the defining elements of craft specialization, we believe we can disengage specialization from the patterns of labour division and instead explore its role within a specific political economy from an anthropological and historically informed perspective.

Our main aim is to address the relationship between craft producer and craft product and the concomitant issue of how value is ascribed to craft goods. In doing so, we question the premise of models which see emergent elites or aggrandizing individuals relying on the appropriation of craft goods to accumulate wealth and power in Crete at this time (Renfrew 1972; Halstead 1981; 1995; Manning 1994; Moody 1987). While craft goods are indeed manipulated within such power strategies, we should devote more attention to the processes by which craft producers might be persuaded to surrender their products. We argue that the value of craft goods, in our case, pottery, is shaped both through the technological attributes of the craft item and by the specific historical and social contexts of exchange and consumption. Apart from addressing the standard production categories (raw material availability and accessibility, production equipment and location, technological know-how), we also need to examine the specific social conditions within which craft goods and craft producers exist and work, looking at ceramics both as technological artefacts and as containers. By prising specialization apart from socio-political centralisation we emphasise the specific socio-historical context that affects the production group and its relationship with its respective community.

For these purposes, we will build upon an earlier discussion of Prepalatial ceramic

production (Day, Wilson, and Kiriati 1997; Whitelaw *et al.* 1997), which focused on demonstrating the specialized nature of Prepalatial ceramics, by looking at the relationship of specialized pottery production with particular strategies of consumption and exchange (Day, Relaki, and Faber 2006). We will also integrate new evidence on ceramic production that has come to light very recently (Todaro 2005; 2007).

Starting at the Beginning: Specialization in “Non-complex” Society?

An essential step in this direction involves a consideration of the earliest evidence for pottery in Crete, the EN ceramic assemblage from Knossos. A reasonable question may be, why start at the Neolithic? For a long time the received wisdom was that initial pottery production was a poor candidate for specialization because the technology was widely available (due to the widespread occurrence of clay) and easy to learn, and therefore its introduction constituted a logical and predictable step for newly sedentary farming communities. It was thought that ceramic production must have been practised at household level to fulfil its immediate, utilitarian needs (much like Earle’s “subsistence economy” model) and therefore, it was small-scale, unspecialized and local. However, a series of recent studies have demonstrated that the development of pottery technology was not such a simple or homogeneous process and, more importantly, that its adoption by communities across the world was not inevitable, but happened at varied scales and paces (Brown 1989; Barnett and Hoopes 1995; Rice 1999; Vitelli 1989). Such studies have emphasized the need to approach pottery manufacture as a complex activity of material and symbolic transformation that needs to be explored within the broader framework of an anthropology of technology (Lemonnier 1992; also Doonan and Day 2007).

These initial assumptions about pottery production were further challenged by ceramic analysis. In mainland Greece, Vitelli (1989; 1993; 1995; Perlès and Vitelli 1999) has argued that the earliest Neolithic ceramics at Franchthi Cave were the products of specialists and that the output of these potters surpassed the needs of household consumption, suggesting that the initial production of ceramics might have had more “social” than “practical” purpose. In Crete, Tomkins’s (2002; Tomkins and Day 2001) analysis of the Early Neolithic assemblage from Knossos has identified a number of different fabrics present even in the first levels following the Aceramic phase, disproving Furness’s (1953) initial belief that these early ceramics were all limestone tempered. The range of different fabrics points to the existence of a number of production groups the sources of which can be identified as relatively local to Knossos (within a radius of 5–7 km), non-local but within the island (*e.g.* a granodiorite fabric with provenance in the Gulf of Mirabello in East Crete) and beyond the island (Tomkins 2002; 2004, 45; Tomkins, Day, and Kilikoglou 2004). It is remarkable that, at a time when the Early Neolithic landscape of Crete is considered “empty” with Knossos the only known settlement, more than half of its assemblage consisted of ceramics in similar forms and finishes which were not manufactured in the immediate vicinity of Knossos (Tomkins and Day 2001; Tomkins 2004, 45–47). Apart from suggesting the existence of other Neolithic communities as yet unidentified, this study demonstrates that ceramics were exchanged from early on and not for any identifiable “practical” or “economic” reasons, since the imported vessels were of the same shapes and surface finishes as the local ones. Although Tomkins (2004, 46) argues that the labour intensive, small-scale and low-intensity pottery production of Early Neolithic Knossos falls short of conventional definitions of specialization (Rice 1991; Costin 1991), primarily because the practice does not appear to be restricted to a few individuals, he recognizes the investment

of a substantial amount of time, energy and skill to allow our alternative understanding of specialization as *skilled practice* to have some bearing in this context. Moreover, his view of early Neolithic ceramic production as a collective activity (Tomkins 2004, 47) undermines the primacy given to household production as the essential mode of production organisation at this social setting.

Such analysis, moreover, places emphasis on the biographic significance of craft items and the intimate connection of the products with their producers. Tomkins (2004, 48) makes a convincing case for the prestige accruing from items acquired from a distance in Early Neolithic society (also Perlès 1992; Perlès and Vitelli 1999). However, since these ceramic objects were virtually indistinguishable from local products in terms of their form and appearance, their “exotic” character could have been established only if their owner and/or producer was present or through the recounting of the biographical story of their acquisition. This is a strong suggestion that the processes of ascribing value to craft goods are better understood within their respective historical framework rather than through the positing of universal rights of alienation.

This discussion further demonstrates that, even from a very early stage, the patterns of craft production played a crucial role in the articulation of relationships within these early communities that can be safely characterised as political. Ceramic production, whether full-time or part-time, of low-intensity or highly intensified, was a specialised act of material transformation that had profound economic and symbolic implications for the power strategies played out at Neolithic Knossos (as Tomkins [2004, 52–53] also demonstrates by tracing the changes in those patterns in the latest part of the Neolithic period). As our knowledge of the Neolithic landscape of Crete becomes more refined as a result of new studies and discoveries (see papers in Isaakidou and Tomkins 2008), the picture of the earliest ceramic production is bound to become more complete.

On the Way to Complexity: Prepalatial Pottery Production

It is generally stressed in the literature that specialization is a continuum and not an absolute state and therefore it is always present, but to varied degrees (Earle 2002, 127–128; Costin 1991, 4; Rice 1991, 265). Taking this view into consideration, (albeit without its assumptions about the correspondence between levels of specialization and levels of social complexity) and since we have argued for specialised pottery production in the Neolithic, where does this leave our consideration of the Early Bronze Age evidence?

Ten years ago a paper to which one of us contributed (Day, Wilson, and Kiriati 1997) addressed the issue of specialization in Prepalatial ceramic production, by examining analytically several hundred samples of Early Minoan pottery from a large number of sites around Crete. Taking into account such factors as *resource* specialization, *functional* or *product* specialization, *site* specialization and *producer* specialization outlined by Rice (1991) as defining elements of specialization, we concluded that according to all the criteria, it was possible to describe pottery production as specialised from at least the beginning of the Bronze Age, with clear evidence for ware-specific clay exploitation. The study explored such issues as function-specific clay mixes; the evidence for specific groups making a limited range of pottery in a characteristic fashion; the probability of specific centres producing a specialist product and the skill and investment devoted in pottery manufacture, which is very clear from decoration and firing techniques, notably from EM IIA onwards. This work demonstrated the complexity of the Prepalatial ceramic system beyond any doubt, but generally concentrated more on the products themselves rather than their

producers. Now we would like to examine in greater detail the *social* implications of specialized pottery production during the Prepalatial period.

The obvious starting point is the settlement of Myrtos Fournou Korifi, the most celebrated of Early Minoan sites, dug and published in thorough fashion by Peter Warren (1972). Analysis of the ceramics showed that about half of the ceramic assemblage at the time of the site's destruction had been imported to Fournou Korifi from locations in the northern side of the Isthmus of Ierapetra, around the Gulf of Mirabello (Whitelaw *et al.* 1997, 267). The other half of the assemblage was local, but there were some initial doubts as to whether production was actually to be situated in the village. On the one hand, Warren (1972, 18, 213–215) identified Room 49 as a potter's workshop, mainly on the basis of the eight clay turntables discovered there. However, the identification was by no means certain, due to the common occurrence of such objects in the ethnographic and archaeological record used as lids for jars and due to the very small dimensions of the room (though this could have functioned as a storage area for what was effectively an outdoor activity). More importantly, the same South Coast fabrics found at Fournou Korifi were identified in the EM IIA and EM IIB ceramic assemblage at nearby Myrtos Pyrgos, while the composition of their sand-sized, aplastic component pointed to deposits that were relatively widespread in the south coast area (Whitelaw *et al.* 1997, 268, 269–270). Therefore, even if there was a pottery workshop at Fournou Korifi, the production of these fabrics was theoretically possible over a broad area, including Myrtos Pyrgos.

However, a recent prospection of geological deposits in the area (Quinn and Day 2007) provided some intriguing new evidence. The broadly local pottery has specific micro and nanno-fossils that aid in identifying the biostratigraphic associations of the clay – in this case tying it to the deposits of the Myrtos Formation (Fortuin 1977). As this is only present in two locations, one of which is the hill of Fournou Korifi itself, it is possible that pottery production was, after all, taking place at the village.

This new evidence makes the situation at Myrtos Fournou Korifi even more intriguing. It is worth noting that the bulk of the imports to the site were in the same range of shapes as the broadly local ceramics (Whitelaw *et al.* 1997, 269). The rest of the imported material consisted of Vasiliki ware, which mainly comprised metal-imitating, pouring and drinking tableware vessels. These two pottery groups, which have roughly the same area of manufacture, appear to be complementary, revealing that their respective production groups were aware of each other's technological choices and repertoire, or even that they were made by the same community.

This situation cannot be interpreted easily and the most revealing aspect of the study is perhaps how complex and interrelated the patterns of ceramic production and consumption were in Prepalatial Eastern Crete. Further results of the analysis showed that there were clear signs of site specialization with whichever location making the majority of Mirabello pottery at this time developing a strong reputation for their products (Day, Wilson, and Kiriati 1997, 285). The same could be argued for Vasiliki Ware and the later East Cretan White-on-Dark ware, as well as the Fine Painted and Fine Grey Ware from the Mesara (Day, Wilson, and Kiriati 1997, 284). Furthermore, the control of firing conditions from EM II onwards is something that reflects not only investment in built firing structures, as the control of reducing conditions in the production of grey wares and iron black reduction Dark-on-Light testifies (Shaw *et al.* 2001, 132; Wilson and Day 1994; Day, Wilson, and Kiriati 1997, 285–286), but it also gives us an insight into the relative skills of different centres producing the same types. For example, the Dark-on-Light and black slip of the Mirabello potters is consistently of higher quality than that of their Myrtos counterparts and

the Mirabello products were technically more competent and suited for their use, though what would have been the perception of the people who inhabited the hill-top site for such concerns? What is certain is that the South Coast/Myrtos fabrics were also exchanged outside of their area of production, having been identified at EM II Malia and Kalo Chorio.

If we have established that there were several traditions of pottery making in the area of the Isthmus of Ierapetra, some of which can be traced to different geographical locations, what is the significance of their co-existence in the ceramic assemblage of Myrtos Fournou Korifi? This is a question that relies as much on consideration of consumption issues as on production concerns. Recent research has suggested that consumption practices at Myrtos Fournou Korifi were strongly affected by collective strategies of commensality and their potential for negotiating and restructuring power relations within the community (Tenwolde 1992; Catapoti 2006; forthcoming; cf. Whitelaw 1983). Ceramics would have been an integral part, if not an essential means, of these strategies. In interpreting the imports to Myrtos Fournou Korifi, we must acknowledge the increased needs for numbers of vessels that such collective events might induce, but we should also pay more attention to the nature of the imported items. Since most of them represented vessel types that were available in the local fabrics, some heed must be paid to their reputation as technological artefacts as well as to the identity and origin of their producers. Catapoti (2006; forthcoming) argues for such commensal practices in Prepalatial Myrtos as being embedded into the strategies of competitive hospitality and excessive generosity that allowed individual “houses” to emerge through the collective fabric of the community. We argue that pottery production (and its concomitant consumption) was another way by which these relationships were played out, both within the boundaries of the settlement – by either negotiating or re-affirming obligations and reciprocity between producers and non-producers¹ – and in relation to the neighbouring sites that might have participated in these events as guests and hosts at different times.

This discussion seems to underline the crucial role of *technological traditions*, that may also have implications for the negotiation of personal and collective identities (Day, Relaki, and Faber 2006), in the structuring of production and consumption during the Prepalatial period. We would like to explore this issue a little further with reference to geographical and temporal patterns of consumption noted throughout the island.

The earliest case of interest is the Kampos Group pottery that occurs in restricted contexts such as the burial caves of Pyrgos (Xanthoudides 1918), Kiparissi (Alexiou 1951) and the newly discovered cave cemetery at Petras (Papadatos 2007), as well as at the open cemeteries of Gournes (Galanaki 2006) and Aghia Photia (Davaras 1971) and the settlement of Poros-Katsambas (Dimopoulou 1997). The striking stylistic and typological affinities of this material with contemporary assemblages from the Cyclades have often been used to argue for Cycladic colonies on Crete (Doulas 1976; 1979). However, recent ceramic analysis has presented the evidence for much of this pottery being made on the island of Crete (Day, Wilson, and Kiriati 1998; Day and Wilson 2007; Doonan and Day 2007, 7; Wilson, Day, and Dimopoulou-Rethemniotaki 2004, 69). At Poros-Katsambas in particular, the contrast between the Cycladic style pottery of EM I and the “Minoan” Cretan products is striking. Not one sherd of the Kampos related pottery occurs at nearby, contemporary Knossos (Wilson 1994, 39; Wilson, Day, and Dimopoulou-Rethemniotaki 2004; Doonan and Day 2007, 6), a fact which demonstrates that not only are these vessels produced in very different ways on Crete, but they are subject to completely different patterns of consumption. Of course it is easy to turn to accounts of stylistic influence and the like to explain this Cycladic-style material. However, its raw materials are from Crete, although

they are blended, tempered and fired in a way which is far closer to Cycladic tradition than the geographically closer Minoan productions.

This is a clear example of how a technological tradition can operate as part of a wider identity encompassing social as well as “ethnic” components. The presence and the distribution of these objects in a specific geographic zone, along the North coast of Central and Eastern Crete (but not the South) reflects differential patterns of exchange and production that may be part of different social practices.² It is even more interesting that, despite the clear importance of these objects as material manifestations of particular identities and/or social relations, their consumption does not support the appropriation of technological products from emerging elite groups, although not much is as yet known of the social organisation at the settlement of Poros.

A similar pattern may be observed in EM IIA West Crete, where two radically different ceramic traditions co-exist, based around high-fired, calcareous, urfirnis Helladic-style sauceboats and related shapes – manufactured in West Crete – which contrast with low fired, non-calcareous, coarse, red slipped and scored fabrics, also produced locally (Nodarou 2003). These ceramic types contrast strongly with the assemblages available in the rest of the island at that time and it seems that West Crete followed completely different consumption concerns in this period. This situation changes in EM IIB, when West Cretan sites such as Psathi become compatible with the pottery styles from the rest of the island, a change that accompanies the contemporary arrival of Minoan styles on a larger scale at Kastri, Kythera (Broodbank and Kiriati 2007). To some, it might be tempting to suggest that shapes and production technologies are standardised throughout the island, but we would rather propose, on the basis of the technological analysis, that perhaps it is not the pottery production that gets standardized, but rather the consumption practices that become more homogeneous throughout the island.

As demonstrated by the West Cretan example, the prevailing patterns of exchange across the island have distinct regional dimensions that tie different production traditions to cultural spheres often quite removed geographically. The intricate nature of these patterns often promotes an artificial separation between exchange and consumption in order to manage the breadth of information more effectively. However, broadly speaking, exchange should be seen as a specific pattern of consumption and as such it greatly affects the nature of production. The patterns of ceramic exchange within Crete reveal not only distinct geographical associations, but also concrete temporal processes.

The interlinked domains of exchange and consumption are painted in the most complex of colours in the Early Bronze Age assemblage from Knossos. Throughout the Early Bronze Age, Knossos continues to be the receiver of a wide range of pottery being brought to the site from discrete production areas. As an example, cooking pots are not locally produced and our recent prospection has refused to reveal closer sources than the phyllites and schists towards Aghia Pelagia for these vessels. In addition, some of the finer tablewares are also from a range of sources that changed through time. During the EM I and EM IIA, Mesara imports like the Fine Painted ware spouted bowls predominate at Knossos, to be replaced by Vasiliki and other products of the Isthmus area in East Crete in the subsequent EM IIB period (Wilson and Day 1994; 1999; Wilson 2007).

This change in consumption patterns is noted throughout the island in the EM IIB period, when most of the fine Mesara products that circulated more widely in the EM I and EM IIA periods are replaced by products from the Isthmus. It is very interesting, however, that although the reputation of pottery production centres seems to have shifted with one location declining while another rose, consumption strategies continued to be focused

around commensal events (though perhaps of different scale and/or focus in the later contexts). Therefore, although consumption contexts remained relatively unchanged, it seems that the technological reputation of the craft producers brought about a crucial transformation in exchange patterns. Such events fed back to the production system and although some form of Fine Painted ware continues in the Mesara until the end of EM IIB, Fine Grey ware completely declines after EM IIA (Wilson and Day 1994) and in EM IIB a local imitation of mottled Vasiliki Ware, along with imported Vasiliki material, makes its appearance (Todaro 2005, 44–45). The relationship between the imported and the local Vasiliki ware in the Mesara is not clear at present, but ongoing research and scientific analysis will hopefully clarify these issues.

It is remarkable that these different levels of exchange can also be noted with respect to imports from outside the island. Although these are rare, they do remind us of maritime exchange at the time of Renfrew's (1972) *international spirit*, with EBII sauceboats and collared jars. Now for the first time, we have evidence of EM I through EM IIB pottery exports from Crete: including those found at Akrotiri on Thera (Day and Wilson 1998; Day *et al.* 2006). While in EM IIA these exports seem to comprise almost exclusively Dark-on-Light jugs, in the following EM IIB period (when there are no Cycladic imports on Crete) we can see a number of vessels from Crete at Akrotiri: primarily Vasiliki Ware long spouted jars from the Bay of Mirabello. It is worth noting that both these exported shapes are pouring vessels, mirroring thus the change in exchange patterns within Crete at this period.

The Prospect of New Evidence: From Contexts of Consumption to Contexts of Production

In terms of *technological tradition*, the Mesara provides a unique example of continuity of potting tradition from the Prepalatial until the end of the Protopalatial period, continuity that has been attributed to a face-to-face transmission of knowledge from one generation of potters to the next (Day, Relaki, and Faber 2006). Unfortunately, however, none of the many excavated sites in South Central Crete has provided evidence for pottery production in either the Pre- or Protopalatial periods and, apart from Patrikies, whose identification as a workshop specialising in the production of teapots has been controversial due to the lack of kilns and proper working areas (La Rosa 2004; Todaro forthcoming), pottery production in the Prepalatial period has been assumed only on the basis of patterns of consumption.

The resumption of excavation at Phaistos (in the area immediately to the west of the west court of the palace) has provided the opportunity of rectifying this situation. Work there has made it clear that the pottery kiln dated initially by Levi to the Neopalatial period, had instead been built during the MM IIB period (Tomasello 1996; Carinci 1997; La Rosa 2002), in an area characterised by a large amount of misfired and vitrified vessels spanning from the EM IIA to the MM IA periods. The contextual examination of these new Prepalatial assemblages, and the detailed reconstruction of the stratigraphy of the area, which was organised on terraces, has suggested that the vitrified and misfired vessels (which are usually associated with lumps of clay) may testify to the activity of pottery firing in the vicinity. Consequently, the construction of the pottery kiln in MM IIB, rather than representing a sharp change in the use of the area, as previously assumed (Carinci 1997), might be seen as continuing the activities performed there since at least the EM IIA period (Todaro forthcoming; 2007). Moreover, the wasters, although re-used in floors and terraces, may have substantially remained within their original context of deposition, because floor

assemblages, architectural and physical features of the area appear to be consistent with pottery production, conducted in the open air, in proximity to paved areas (Todaro forthcoming).

This discovery indicates that the similarity between the clay paste recipes and other properties of some EM II Fine Painted ware and MM II Kamares were revealed by analyses (Day, Relaki, and Faber 2006), might have been matched by a consistency in the location of the pottery production within the same site. It also highlights a particular social context in which production might have taken place, as the mechanism that ensured the actual transfer of knowledge from one generation of potters to the next. While the material is still under study, examination of the wasters and of potters' marks occurring in this assemblage has further suggested that the pottery produced in the western slope of the hill was consumed in the same quarter and in the structures that faced an early paving located beneath the west court of the palace, an area that, since the FN period, was used periodically for episodes of communal consumption (Todaro and Di Tonto 2008). Furthermore, the deposition pattern in the suggested production area, alternating between activity and abandonment, with repetition of features such as floors, paving and structures, all in the same spot but at different levels, may imply that cycles of production occurred on very specific occasions, even marking new occupation phases in the history of the site, after a destruction or an abandonment (Todaro 2007). If this observation proves correct, we might suggest that pottery production at Prepalatial Phaistos may have been an activity conducted by specialists working in a concentrated fashion, for specific and temporarily restricted occasions.

Ongoing study seeks to clarify whether the potters were independent members of the community that produced for local consumption – domestic and ceremonial – whenever the occasion arose, or whether they were sponsored artisans. In this regard, particular attention has been paid to the re-worked sherds fashioned in triangular and circular shape, the latter of which can be separated into two groups on the basis of their dimensions: one with specimens ranging from 18 to 23 cm in diameter, the other with examples spanning from 2 to 4 cm (Militello 2001). The second group is far more numerous than the first and comprises tens of pieces that, on account of the presence of fractions, might be interpreted as tokens of a primitive accounting system (Todaro forthcoming). But can their presence in a pottery production area indicate that potters were recording their output?

One can think of a variety of contexts that host such counters, which have generally been called gaming pieces. First and foremost, Poros-Katsambas in EM IIA, which has triangular counters, where they accompany obsidian reduction and metalworking. They are also present in small numbers in the West Court House of Knossos (Wilson 1985) and at Myrtos Fournou Korifi (Warren 1972, 217–218, 239), in a context which now seems more likely to be related to pottery production. At Phaistos the presence of many leftover pieces, indicating *in situ* production, could suggest that the counters, as a pottery by-product, were found within a pottery production area because the raw material was more abundant there. However, the high concentration of specimens cut out from misfired vessels, and the 1:1 ratio revealed by a misfired vessel from which a single clay disc had been cut, might indicate that the discs were actually used as a means of keeping a record of the failed product, or to record the number of vessels fired by different individuals in the same kiln load. It may be of interest in this respect that in EM IIB, we see a rise in some areas of Crete of potters' marks, as for example on handleless cups from Phaistos or in goblets from Knossos.

At the present juncture, it is rather difficult to interpret the use of these counters with

any certainty, to consider whether they clarify the relationship between the production groups and their respective communities. Equally, it is difficult to evaluate the implications of the new evidence from Phaistos for understanding the pattern of interaction between the communities of the Mesara in both the Pre- and the Protopalatial periods. Our planned analytical programme will seek to clarify the extent to which the pottery produced by the Phaistian workshops was destined for local consumption, both domestic and ceremonial, or was also exchanged within south central Crete and beyond.

Discussion: The Socio-political Dimensions of Prepalatial Pottery Production

So what are the socio-political and economic implications revealed by this survey of Prepalatial pottery production, consumption and exchange? Analytical work throughout Crete has suggested that raw material choice, paste recipes and different modes of firing might have had a deep meaning in terms of group identity for those working within a particular pottery making tradition. Such traits are useful in defining the particular technological identity of a production group. However, technological tradition does not exist outside of the social milieu within which it unfolds. Therefore, it is crucial to ask how this group identity interacts with any other identities, as for example belonging to a specific kin, or co-residence group. Furthermore, for a “technological” group to appreciate that they are different from other similar groups, they have to come in contact and contrast with other such groups and their products. This largely happens through consumption processes.

The case of Myrtos Fournou Korifi demonstrates how different traditions of clearly specialised pottery production can co-exist within close proximity and also be part of common or related consumption strategies within a single site, no matter how small or politically undifferentiated that site may be. Furthermore, the exchange patterns of ceramics between Myrtos and other sites in the Isthmus area provide some support in placing ceramic production and consumption at the collective level of the community/settlement.

It has been suggested from Myrtos that the nature of ceramic production, as well as the exchange strategies related to it, might have been affected by investment in collective acts of eating and drinking – a situation that may also be reflected in the production patterns of Prepalatial Phaistos. Although such events would require the consumption of substantial amounts of pottery each time, it is quite likely that a significant portion of these ceramics existed from previous events and/or might have been kept for subsequent occasions. Therefore, the output required by the potters might not have been too regular or too large. However, practices of conspicuous consumption and ostentatious display (Catapoti 2006) would have required the renewal of existing drinking kits, thereby stimulating the production of more vessels. Extensive deposits of pottery sets from such ceremonies have been documented at Knossos, in a late EM IIA pit deposit (Wilson 2007). The new ceramic assemblages at Phaistos, although still under study, may prove to reflect an analogous situation, coupled with the evidence of *in situ* production. It is possible therefore, that ceramic production might have taken an intensive and large-scale format in preparation for such events.

In the case of Myrtos, it may also be that such conspicuous consumption practices generated the need for imports to the site, although an additional parameter needs to be considered in relation to this imported material. Since both local and imported ceramics comprised a large amount of similar shapes, it is possible that these imports were used as trademarks of their respective production groups and, perhaps, locations. If, moreover, their owners/producers were present in such events as guests (with the obligation to reciprocate

on an analogous occasion), then this technological identity might have further signalled a specific geographical association. Therefore, the production of pottery for such events may have had a specifically *communal* character, as a means of representing and re-affirming the boundary of each community. On the contrary, consumption constituted the main domain in which the playing out of intracommunity power relations took place, if, as Catapoti (2006; forthcoming) has argued, the performance of ostentatious acts of hospitality during these communal events was used as an opportunity by individual households to promote themselves. So, although the specialised production of pottery at Myrtos did not seem to be controlled centrally by any overarching authority, the prevailing patterns of consumption and exchange in the area ensured that pottery manufacture had a central political role in the negotiation of the site's position in the regional landscape.

Equally, taking the Prepalatial funerary record from the Mesara as another relevant example, the irregular occurrence of funerals would be a mitigating factor against the need for regular procurement of new ceramic products for deposition in the tombs.³ On the other hand, commemorative and/or other ceremonies taking place at the cemeteries might have been more regular and would have required a rather steadier output of pottery, as seems to be the case in the later part of the Prepalatial period. It is also likely that production happened in association with (or even within the context of) particular consumption events as another means of ostentatious display, this time of technical and artistic skill. Such might be the case with the EM I deposit from the Piazzale dei Sacelli in Aghia Triada, where not only were a very large amount of vessels (and their contents) consumed, but the quality and sophistication of this assemblage is unprecedented in the Mesara and island-wide (Todaro 2003),⁴ while a similar situation may be reflected in the much later MM IA assemblage from Patrikies, although this material is not as yet sufficiently studied. The preliminary observations on the new ceramic material from Phaistos may also support such a theory, if indeed the co-existence of different potters in the same location can be confirmed by the further study of the counters, potters' marks and ceramic analysis. The significance of demonstrating expertise in a specialised activity has been underlined by Mary Helms (1993, 69–87) in her discussion of how skilled competence can operate as a means to achieve leadership or elite status. In such contexts, therefore, craftspeople or people associated with them could directly reap benefits (status and/or power and wealth) from an association with craft production.

Of course, all this discussion of possible scenaria concentrates on production to cater for specific and structured consumption events, and does not take into account the everyday use of ceramics. However, renewal of utilitarian vessel kits for everyday use also might not necessarily have been an activity happening all year round as an exclusive occupation. Nevertheless, when it did happen, it seems quite possible, judging from the technical characteristics of the pottery produced, that it was full-time and full-scale, albeit for a limited period. Not only are the high quality iron reduction blacks of the Prepalatial Mesara worthy of remark, but the technological level generally is remarkable, especially when we think of the Vasiliki wares. This has some important implications for our understanding of:

1. the roles of different people within the production process, the input and output required, the materials and resources used. Knowledge of the appropriate raw materials as well as apprenticeship and recruitment practices would have had the greatest significance in this process. Our investigation of technological traditions in the Mesara has suggested that not only were specific paste recipes passed down the generations, but even specific ways of manipulating clay and forming the vessel

body, practices which reveal that instruction must have been a case of face-to-face interaction (Day, Relaki, and Faber 2006). A discussion of who would be chosen to be initiated in pottery manufacture should be guided mainly by the knowledge of the specific social contexts in which producers operated.

2. This brings us to the relationship of potters to the rest of the community. Was this a strictly symmetrical and reciprocal relationship? It seems possible that during the process of producing pottery the specialists would rely on the rest of the community for their immediate subsistence, although again we know nothing of the gender roles within the production group. Such reliance however, would go both ways in that the community would rely on the specialists for procurement of the necessary craft goods. Moreover, as potters were not the only craft specialists in Prepalatial communities, it is quite possible that their social position within the community would also be shaped by the relative significance attributed to crafts in general and the necessity of other craft goods in particular (see also discussion in Doonan and Day 2007). It is evident, therefore, that even without centralised control of production or institutionalised labour, craft specialization must have been deeply embedded in distinct power strategies.
3. This last point brings us back to the discussion of how value was ascribed to craft goods and how easy it would be to be dissociated from their producers.

Throughout Crete during the Prepalatial period, but more so in its later part, specific and substantial emphasis and investment was placed on collective practices at the level of the settlement (Catapoti 2006). In the Mesara such investment focused on a variety of material and symbolic resources with communities being embedded in quite competitive strategies on a regional level (Relaki 2003; 2004). Pottery production – especially for its paramount role in supplying craft goods within the mortuary arena, which towards the end of Prepalatial become dissociated from strictly funerary rituals (Branigan 1993) and therefore become potentially more regular – appears to have been among such resources. So the “value” of such craft goods would have more likely been appreciated and acted out on a collective level, through its association with specific consumption events (events that may even go back to the FN in the Mesara: Relaki 2003; 2004, 177; Todaro and Di Tonto 2008). In other words, it would not have been easy for aggrandizing individuals or groups to “profit” from an exclusive association with such goods. Granted, distinctions within each community were played out through the use of decorative schemes and specific sets of tableware and the structuring of consumption within the actual events, such as who was allowed to consume what, in what order and quantity. However, as far as appropriating the outcome of craft production to achieve status and/or wealth differences, the opportunities would have been scarce and heavily burdened with rules regulating appropriate behaviour. Moreover, if any type of accumulation or hoarding was taking place, it was again on a *collective* level, as is demonstrated by the masses of ceramic vessels stored in the antechambers and the Camerette in Aghia Triada (Banti 1930–31; Cultraro 2000) or the hundreds of stone vessels in Platanos (Xanthoudides 1924), both of late Prepalatial date.

The same safeguarding of collective behaviours and products continues in the Protopalatial period, when presumably a centralised mechanism is in place, however, the pottery production may remain largely unaffected by this supposed centralisation of authority. This suggests to us that, rather than studying specialization as simply reflecting the changes in social complexity, we may profit more from the perspective of skill, knowledge and technical competence in our examination of specialized production.

Conclusion

To summarize, we have explored the relationship of pottery producers with other technological groups and their respective communities. The latter were not simply people for whom potters produced, but were related to them through a complex nexus of social relations. This understanding gives us an insight into the political and economic implications of pottery production on a micro-level.

On the other hand, the identification of site specialization for several communities, as for example the Mesara for Fine Painted and Fine Grey ware and the southern edge of the Gulf of Mirabello for Vasiliki wares, has underlined that specific pottery production traditions might have been used to herald distinct regional identities. This articulation would highlight the political significance of pottery on a macro-level, involving interactions throughout the island. So, although Prepalatial ceramic specialization cannot reveal much about the centralisation of political institutions, it does reveal plenty about power relations and their implication in the diverse political economies of Prepalatial Crete.

While there is certainly a lively and complex system of specialist production, exchange and consumption, what Earle would refer to as *the material flows of goods and labour through a society*, and although there are differences in the scale of production over the course of the Prepalatial, it may not be necessary to see these ceramic goods as being *channelled to create wealth and to finance institutions of rule*. What we have suggested, then, is that this is not the case of potters *living from pots*, but rather, together with the rest of their community, *living through pots*.

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Notes

- 1 Pottery must be viewed as one product within a range of craft or other commodities produced on the site, and thus potters could be equally indebted to the producers of other items, as much as the non-pottery producing population might have been in debt to them. It must also be acknowledged that “payments” might have involved services and not just material objects. In this respect, pottery could have been manufactured in exchange for political favours. See also Doonan and Day (2007) for a discussion of the intricate relationship between ceramic and metal production in EBA Crete. It is also worth noting that “Cycladic” or “Cycladicising” artefacts and materials are found frequently in funerary contexts in the

3

Mesara, but Cycladic type ceramic vessels of the kind encountered along the north coast of Crete are strikingly rare. This pattern is a strong indication that different exchange patterns and “values” applied to different craft products.

4

However, we must bear in mind the rarity of published domestic (non-funerary) assemblages from the Mesara that would provide the necessary comparison to these patterns. The ongoing research by the Italian Archaeological School and the work in progress on the new Prepalatial sequence from Phaistos and Ag. Triada (Todaro 2003, 2005) will rectify this gap somewhat. Perhaps a similar pattern may be posited for the production of obsidian blades in the context of funerary practices in Prepalatial Mesara (Carter 1998).

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WEDGING CLAY: COMBINING COMPETING MODELS OF MYCENAEAN POTTERY INDUSTRIES

Michael L. Galaty

Introduction

Pottery is the quintessential archaeological artifact. As is often noted, whether true or not, it “lasts forever” and is ubiquitous. In the Aegean region, prehistoric pottery – fine painted pottery, in particular – is a key chronological marker, an index fossil. Most Bronze Age pottery also carries symbolic and functional information and for this reason can be, and often is, a primary subject of research and analysis in its own right: the study of pottery for pottery’s sake. More rarely, Aegean pottery is studied not as a chronological marker or for aesthetic or functional reasons, but rather as a proxy measure of other human behaviors, such as social or economic interaction. Of importance to the study of Mycenaean political economies, because little is said about pottery in the Linear B records, archaeological data about production, exchange, and consumption of Mycenaean ceramics can add some breadth to the rather narrow picture painted in the tablets. It seems likely that Mycenaean local and palatial political economies intersected and were articulated to some degree within the context of the regional ceramic system.

In this paper I revisit the results of my dissertation research on Mycenaean pottery from Pylos (Galaty 1999, 2007). I will not simply rehash these results but will reconsider them in light of new archaeological data from Messenia collected by the Pylos Regional Archaeological Project (PRAP). My data also can be compared to new data from ceramic analyses conducted in other parts of Greece that indicate similar systems of ceramic production, exchange, and consumption in various Mycenaean and non-Mycenaean Aegean contexts. Finally, these similarities, and some important differences, can be explained through the combination and application of theoretical frameworks drawn from recent, general research on Mycenaean potting industries and political economies.

Available data on Mycenaean ceramic systems all appear to point in the same general direction: in all states yet studied pots were 1) manufactured and distributed at several different regional scales; 2) consumed in similar contexts; and 3) were variously important to political economies – all depending on type. The argument I built in 1999 still holds today in light of these new data. Different types of pottery were of more or less interest to the palace depending on the role(s) they played in implementing the political-economic goals of local and palatial Mycenaean elite. Some pottery types (“staple” ceramics) were of less interest than other types, such as kylikes, that held greater symbolic value (“wealth” ceramics) and were worth controlling (see Galaty 2007). The structure of the Mycenaean ceramic system thus reflects the structure of the wider Mycenaean political economy, which was shot through with organizational and social incongruities. The structure of the Pylian ceramic system, as I have reconstructed it, indicates attempts to reconcile, or in some cases exploit, these incongruities.

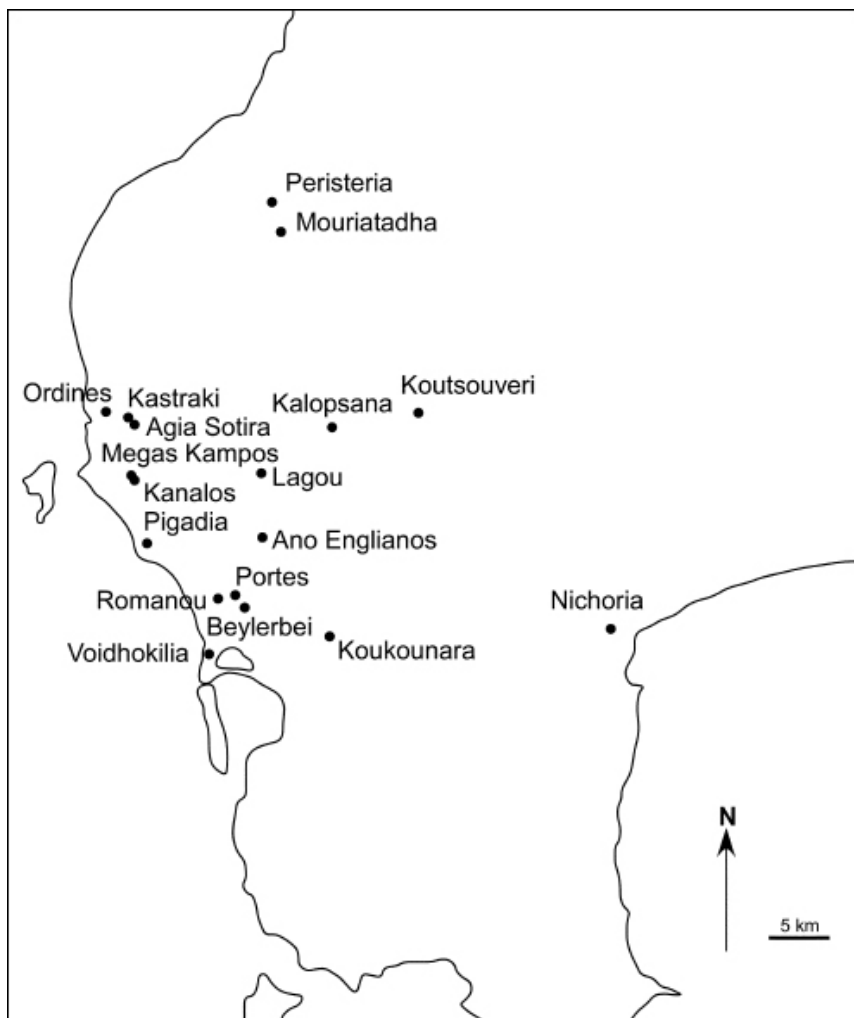


Figure 12.1. Map of Messenia indicating sites from which pottery was analyzed.

Pylos

In 1999 I reported chemical and petrographic analysis of 310 coarse and fine ware sherds from 18 LH III sites in Messenia (most sherds could be firmly dated to LH IIIB; Fig. 12.1). These sherds represent many different vessel types, but approximately 114 were definitely from kylikes. I argued that although the palace needed pots, and may even have sought to control the distribution of some ritually charged types, such as kylikes, the potting industry was not centrally administered, though pottery indeed may have been made at or near the palace itself, *i.e.* at the central place. In general, pots in Messenia were made using three different clay pastes: one based on common, coarse, red, illitic clays, variously tempered; one based on rare, fine kaolinites that required no preparation, such as levigation or sieving,

before throwing and were never tempered; and one that mixed illites and other clay/soil types.¹ Vessels made from kaolinite were widely distributed and yet may have come from a single source, indicating nucleation of production. Most fine wares analyzed, including nearly all of the kylikes, were made from kaolinite. Vessels made from illites were probably produced by individual potters or in small workshops and were distributed less widely.

Other studies of the Pylian ceramic system have tended to confirm the results of my research. Hruby, Knappett, and Whitelaw, for example, drew similar conclusions about the Pylian pottery industry based on analyses of Linear B evidence and excavation data from the palace: the industry was relatively de-centralized and un-controllable (Hruby 2006; Knappett 2001; Whitelaw 2001; see also Sherratt 1999; van Wijngaarden 1999). The palace purchased and/or produced enough pottery to fill its own needs first, and excess pottery may have been given away, perhaps at ritual events such as feasts, and, more rarely, exported (e.g., to Canaan; see Gunneweg and Michel 1999). Whitelaw, however, vastly overestimated the availability of good clay in Messenia, as have most Aegean prehistorians, and so also may have overestimated the numbers of facilities involved in pottery production (Whitelaw 2001, 70, 72, fig. 2). As he notes (Whitelaw 2001, 51), his conclusions are not at odds with mine (Galaty 1999, 2007), but the breadth of the pottery industry he reconstructs is.

Scale

The data I collected in 1999 indicate that the LH IIIB Messenian pottery industry operated at multiple scales, in several different manufacturing modes. This affected the political-economic uses to which pottery could be put. There are historical and economic reasons for these scalar and modal differences, but they also result from the region's distinctive ceramic ecology. The Late Helladic ceramic industry did not spring forth fully formed, as some Mycenaean industries may have done, but like other traditional industries, had been around since the Neolithic. As a result, households and "businesses" in Mycenaean Pylos, including the palace, probably relied on well-established systems of ceramic exchange in order to acquire needed pots. Halstead makes this same point for other traditional, non-palatial forms of Mycenaean economy (Halstead 2003, 60). There may have been some domestic pottery production, but the bulk of pottery would have been produced by part- or full-time professional potters, distributing pots at different scales (Costin 1991). Any of these professional potters could have been "attached" to an elite residence, such as the palace, though as Knappett and Hruby both assert, attached production, as defined by Costin, appears unlikely (Costin 1991). As Whitelaw describes, there are indications in the Jn-series of tablets from Pylos for bronze working by groups of independent, associated smiths (Whitelaw 2001, 69, based on the work of Smith 1992–1993). The same may hold for pottery production, without corresponding detailed records in Linear B.

Generally speaking, there are two types of clay in the vicinity of Pylos that could be used to make pottery. I came to this determination by conducting ceramic resources surveys in catchment zones surrounding every PRAP site in my study. Both clay types are easily distinguished chemically and petrographically. These two clay types, illite and kaolinite, account for two broad paste recipes, Fabrics 1 and 2 respectively. Fabric 1 can be further divided into a number of sub-types, Fabrics 1a, 1b, and 1c, which vary chemically and in the types, amounts, and sizes of their natural inclusions. Fabric 1c is the "mixed" paste mentioned above, which combines chemical and petrographic attributes of illite and kaolinite (and in some cases marl soils). Nearly all fine-ware sherds in my sample are made from Fabric 2; they contain very few natural inclusions and are never tempered. All coarse-

ware sherds in my sample are Fabric 1, and are occasionally tempered, primarily with mudstone grits and/or a distinctive red shale, but never with grog.

There are key differences in the availability and workability of kaolinite and illite. Messenian kaolinites are found in primary beds, laid down in low-energy, probably marine environments or transformed in situ from bedrock parent materials. These clay beds are rare, often deeply buried, and are only exposed in situations where overlying alluvial and colluvial deposits have been eroded. Kaolinite clays could be used as is, with no processing. They are very well suited to mass-production by fast wheel. In fact, the traditional Vounaria potter I visited in 1995 still mined kaolinite clay from a secret source, made his pots using a kick wheel, and fired them in a mud-brick kiln.² The only Late Helladic archaeological site directly associated with a kaolinite source is the palace. I assessed the suitability of the kaolinite clays by conducting various experiments to test shrinkage, firing characteristics, and general workability. A serviceable pot could be made from kaolinite quite easily. It suffers almost no shrinkage, is therefore impervious to cracking while drying, and consequently does not need to be tempered. Some kaolinites in my sample, however, did not stand up well to firing and disintegrated rather quickly after cooling (within a matter of days or weeks), and would not have been suitable for pottery production. When fired in an oxidizing atmosphere, kaolinites from Messenia change colors from grey to pink to pale brown, after which point they begin to vitrify and assume the greenish-yellow color associated with so-called “palace” ware.³

Illite is the primary clay constituent of the alluvial/colluvial “red beds” found in various places throughout Messenia. These clay soils often incorporate large numbers of various natural inclusions and may have been levigated or sieved before use. Even with levigation and sieving, they are difficult to work and would not have been easily thrown on a fast wheel. Messenian coarse wares may have been manufactured by hand or using a hand wheel or *tournette*. As with kaolinites, some illites did not fire well and would have been unsuitable for pottery production. All illites turned a deep shade of red when fired (Munsell 2.5YR 4/8 red). Color did not change with increased temperature.

Neolithic and Early Bronze Age pottery from Messenia is made from illites. The first use of kaolinites occurs in the Middle Bronze Age, perhaps stimulated by introduction of the fast wheel and importation and emulation of Minyan wares. Given the fact that kaolinite is a limited, “patchy” resource, the shift from the exclusive use of illites to the use of kaolinites may have been driven by competition between a small number of potting collectives, those with access to kaolinite and the means to industrialize production by introducing wheels and higher-temperature kilns. At the same time, many smaller potting establishments continued to make and distribute coarse pottery made from illites. By Mycenaean times, there may have been one or a very few potting establishments producing and distributing all fine wares, and many more smaller establishments producing and distributing coarse wares, including specialized forms like pithoi and cook pots. Production of fine wares was centralized (*i.e.* nucleated) and was therefore more likely to have been administered by representatives of the palace. Coarse vessels were probably produced and distributed outside the control of the palace and constitute good evidence for non-palatial forms of private economic activity, though it is not clear what the mechanism(s) responsible for their distribution may have been (gift ing, marketing, *etc.*). Both the chemical and petrographic data support this scenario.

Fine ware Fabric 2 was identified at all sites from which fine wares were collected (Fig. 12.2). It is the most widely distributed fabric and is most strongly associated with Ano Englianos, where it may have been made. Large numbers of Fabric 2 sherds were found at

all sites sampled, with the exception of Koukounara. Fabric 1c, the “mixed” illite-kaolinite fabric, has a distribution that is very similar to that of Fabric 2.

Coarse ware Fabric 1a was found at only six sites and is the most narrowly distributed. It is strongly associated with Ano Englianios and with Peristeria to the north. If as Bennet has argued, Peristeria was occupied prior to LH IIIB, then Fabric 1a may represent early, strong connections between it and the palace (Bennet 2002). Since Fabric 1a is also found at Koukounara (in relatively small numbers), it may be that it was produced somewhere in the central regions of the Hither Province. Fabric 1a sherds are the only ones that contain large, red shale inclusions (See Galaty 1999, 69, 64, pl. 14). This shale is found only in the hilly areas east of the palace, near Maryeli and in various parts of the Further Province (Galaty 1999, 69; see also Matson 1972, 203), so an east-central production locus seems possible.

Coarse ware Fabric 1b is very strongly associated with Koukounara. There is very little of it from the palace, but substantial amounts from Mouriatadha and Nichoria. According to Bennet, Peristeria was abandoned at the start of LH IIIB and was replaced by Mouriatadha (Bennet 2002). As a result, Fabric 1b may be chronologically later than 1a, and given its southern and eastern, Further Province associations, may have been produced at Koukounara or somewhere further east. If Bennet is right, and Mouriatadha was the Further Province capital at *re-u-ko-to-ro* (Bennet 2002), then Fabric 1b indicates ceramic connections between Koukounara, Nichoria, and Mouriatadha, via Further Province trade routes, to the exclusion of the palace and sites in its vicinity. This is particularly interesting in light of the Fabric 2/1c distributions described above. Why did Ano Englianios and Koukounara acquire the bulk of their pottery from two different sources in LH IIIB? Why did Koukounara’s residents have a preference for coarse wares? Many of the samples acquired from Koukounara were from tomb contexts, but this bias cannot fully explain these patterns, which are discussed further below.

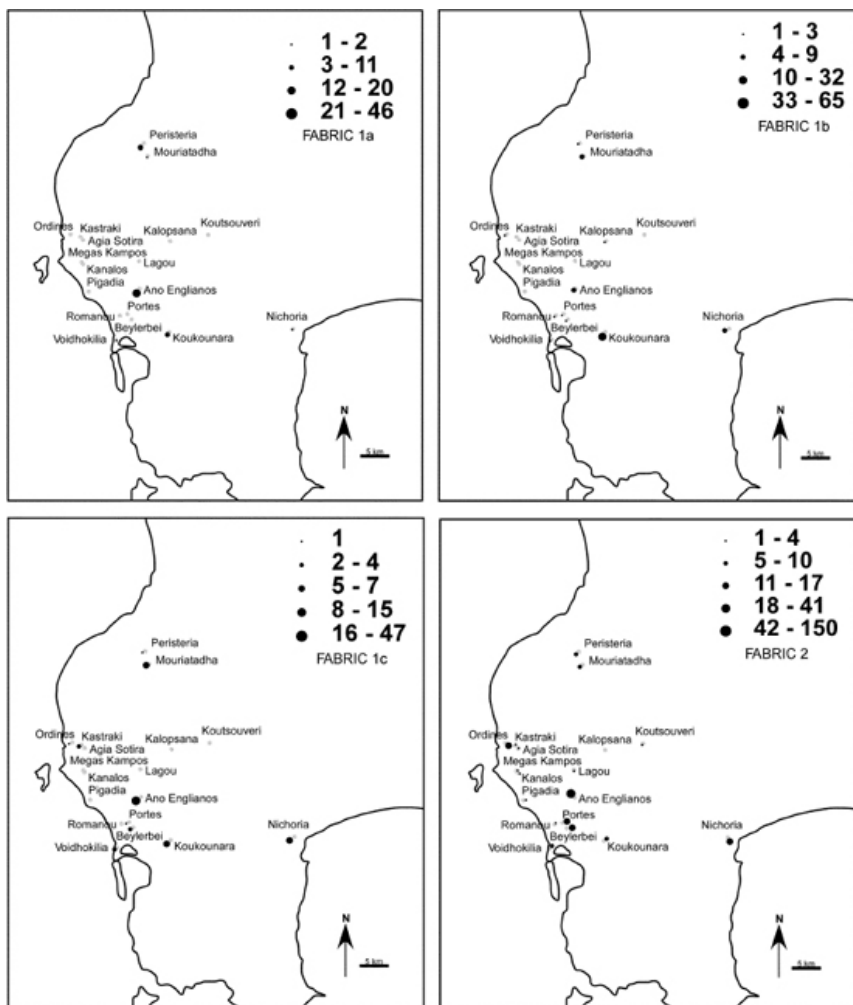


Figure 12.2. Density distributions of pottery by fabric type.

Contexts of Consumption

As described above with regard to scale, historical, economic, and ceramic-ecological forces all affected how pots were made in Messenia, and where and from whom people got them. For example, those with access to clay may have made their own pottery for consumption within the household. This may have been a family tradition. Or, they may have made pottery because they were too poor, frugal, or isolated to purchase or trade for it. Perhaps they preferred food cooked in homemade pots. Nevertheless, it seems possible that domestic modes of pottery production did not exist to any great degree in Messenia during LH III.4 Social forces may have mitigated against domestic pottery production, encouraging people to acquire pots on the open market. Certain kinds of Mycenaean pottery, such as pithoi and cook pots, served special needs and could only be acquired from professional

potters. Pithoi and cook pots in my sample, for example, contained exotic tempers and must have been manufactured by specialist, perhaps itinerant, potters (Galaty 1999b, 67, 69, 77). Pottery also served political and ritual needs, and acquiring special types or sets of pottery, for feasts for instance, may have been essential to successful negotiation of Mycenaean social systems (Wright 2004a, 2004b). Domestic manufacture would not have been able to meet these needs

Rather than indicating domestic pottery production and consumption, the data point to several large, regional potting facilities or collectives serving large numbers of consumers. It may be that at least by LH III most, if not all, Messenians preferred to purchase their pottery, or trade for it. This being the case, and given the large numbers of pots needed annually, the ceramic industry was a meaningful, potentially lucrative, component of the economy. Whitelaw estimates that the whole Pylos polity consumed between 600,000 and 1.25 million pots annually, made by as many as 100–200 full-time or 450–500 part-time potters, thereby employing as much as 1% of the total population (Whitelaw 2001, 67). Pottery was therefore a product and industry worthy of administration, if not by the palace itself, then by potters, potting families, or pottery brokers, in particular those with access to good clay and the wherewithal to produce for a mass market.

Kylikes represent well the complex forces that together determined how Mycenaean pottery was made, marketed, and consumed (see also Knappett 2001). Of all pottery types, kylikes are the most strongly associated with Late Helladic forms of mass production. They were made rapidly, in large numbers, and in a wide variety of similar forms (Hruby 2006, 208). Unlike all other types in my sample, they are made almost exclusively from kaolinites. Of the 114 kylikes I tested, only 19 (17%) were made from illites. This is not a sampling bias. Kylikes are rarely made from red clays, and when they are, they are poor, handmade imitations of those mass produced from kaolinite. While most Aegean archaeologists have said that because kylikes were mass produced, they were not valued – the Dixie cup of the Mycenaean age – I would argue that it is because they were valued that they were mass produced. I have made the case that kylikes were valued due to their importance in ritual, such as feasting (Galaty 1999, 2007), but the fact is that they may have been valued in different ways, used in different contexts, for different political and/or economic reasons.

As is repeatedly stated by post-processual archaeologists, all objects are symbolically loaded: all artifacts, whether “prestige” goods or not, once carried meaning and value. We need to know what Mycenaean pots, such as kylikes, meant to Mycenaean in order to know something about how they were valued and consumed, and therefore how they may have been deployed in the wider political-economic system.⁵

According to Hodder, based on ethnographic work in Africa:

... in a Lozi village, pottery similarities did not passively reflect learning networks and interaction frequency. Rather the pottery style was used to create social differences and allegiances within the village; it was produced to have an active role. Similarly, some artifacts indicate social boundaries in Baringo, in Kenya, but spears for example, do not. This is because spear styles are used by young men to disrupt the authority of older men. They play an active role (Hodder 1986, 8).

Kylikes were introduced during the Late Helladic III (Wright 2004a, 25; see also Shelton, this volume) at the same time various Mycenaean centers, organized around palace structures, gained administrative control over large territories. Bennet and Shelmerdine have reconstructed, based on PRAP data, the process whereby Pylos first took control of its own hinterland and then integrated the Hither and Further provinces (Bennet 1995, 1999,

2007; Bennet and Shelmerdine 2001; Shelmerdine 1999, 2001). This does not appear to have been an entirely painless process. They describe the selective promotion of some settlements, which were allowed to grow, presumably at the expense of those settlements that shrank or disappeared (Bennet and Shelmerdine 2001). As described above, Bennet implicates the palace in explanations of the disappearance of Peristeria and the foundation and growth of Mouriadadha (Bennet 2002). It was within (or perhaps as a result of) this political context that Mycenaean elite living at Pylos sponsored feasts, to which regional elite would have contributed and been invited (Bendall 2004; Wright 2004a). The large numbers of kylikes stored at the palace were apparently used at such feasts (Bendall 2004; Knappett 2001). I would argue, therefore, following Hodder, that kylikes were multivalent and played a dynamic role in the political-economic contests, such as feasts, that followed and accompanied attempts to better integrate the Pylian state (Hodder 1986, 8).

Fine ware kylikes were found by PRAP on most sites in the vicinity of Pylos. This may mean that they were in fact common tableware, used at all homes in all villages. I think, however, that they are indicative of ritual and feasting at secondary and tertiary sites, emulating those conducted on a much grander scale at the palace itself, as is also indicated in Linear B (e.g. PY Un 718).⁶ Direct evidence for such de-centralized Mycenaean feasting behavior comes from Tsoungiza, a secondary satellite of Mycenae located in Nemea (Dabney *et al.* 2004, 77). Furthermore, the distribution of pottery storage at the palace indicates that fine pots, including fine kylikes, were employed for dining at large feasts, held in court 63, whereas coarse pots functioned in some other capacity. Wright notes based on analysis of Blegen and Rawson's data that the palace's different pantries held pottery made from different fabrics: pots in rooms 18–22 were of a "uniform" fabric and pots in rooms 60 and 67–68 were of a "coarse, dark" fabric (Wright 1984, 23; Blegen and Rawson 1966, 351–353; see also Carrington-Smith 1999, 88). Indeed, Hruby's macroscopic study of the pottery from the palace confirms that there are indeed four fabrics, which are presumably the same I identified: one fine ware fabric (Fabric 2) and three coarse ware fabrics (Fabrics 1a, 1b, and 1c), two of which, according to Hruby (2006, 227), can be associated with pithoi (Hruby 2006, 199, and 227 regarding pithoi). Whitelaw expands Wright's study to include room 9, which contained 550 fine ware kylikes (Whitelaw 2001, 55–57; Wright 1984).⁷ Recently, Bendall has suggested that the coarse wares in rooms 67–68 were cook pots used to prepare the food served at the feasts held in court 63, whereas the coarse wares in room 60, including 267 kylikes, were used by people who attended feasts but were not served within the palace proper (Bendall 2004, 119, though Hruby 2006, 108–109 argues that most of the pottery in rooms 67–68 were meant for domestic, utilitarian use). They were served in the external court 58 (Bendall 2004, 122). Thus the pottery stored at the palace indicates a hierarchy of types and fabrics that perhaps reinforced the social hierarchies operating in Mycenaean society generally (Bendall 2004, 122–124; Whitelaw 2001, 58; Carrington-Smith 1999 argues, however, that room 60 is chronologically later than the other pantries).

Clay kylikes were produced in imitation of kylikes made from precious metals, which were well beyond the reach of most Mycenaeanans (Bendall 2004, 122–123). This is no accident. As van Wijngaarden describes, "... Mycenaean ceramic vessels would be well-suited not for elites, but for groups with aristocratic aspirations" (van Wijngaarden 1999, 32). Kaolinite kylikes were used at feasts by individuals who sought to achieve high status, marked by ownership of a metal kylix. And coarse, red kylikes were used by those who might someday own a fine, kaolinite kylix. Consequently, the relationship of kaolinite to metal kylikes is not "low brow" to "high brow" (Levine 1990). It is "high brow" to "higher brow." Handmade illitic kylikes were "low brow." What we do not know is whether kylikes

functioned like Lozi pottery, to reinforce social differences and allow exclusion. Or, whether kylikes functioned like Baringo spears, to blur social differences and upset systems of status.

Political-Economic Roles

More than any other pottery type, fine ware (kaolinite) kylikes can be symbolically associated with public ritual events, such as feasts. These kylikes were probably mass produced by a single workshop. Hruby indicates that all the fine ware pottery from rooms 18–22 at the palace was made by a single potter, thereby corroborating the results of my research (Hruby 2006, 192, 194, 215).⁸ Four potters are mentioned in the Linear B tablets from Pylos (Bendall 2004, 108–109; Hruby 2006, 199; Palaima 1997, 410–411). One of these is *pi-ri-ta-wo*, the “royal” potter most commonly mentioned in the literature. He is granted land in Pakijane by the palace. Another is *qe-ta-ko*, who is included in a list of slaves and craftsmen who have delivered a goat or goatskin to the palace. The other two potters are not named and we know little about them, except that they are from *re-ka-ta-ne* (Papadopoulos 1997, 459). Given the results of my research and that of Hruby’s, it seems altogether possible that *pi-ri-ta-wo* produced the fine ware pottery found at the palace, whereas the other potters mentioned in the tablets (or potters of similar status) produced the coarse wares (Hruby 2006; see also Wiener 2007). There is thus a remarkable convergence of evidence indicating that fine ware pottery was produced, distributed, and consumed in contexts that were very different from those in which coarse ware pottery was produced, distributed, and consumed. Fine and coarse pots were valued differently, as were their makers.

Recently Nakassis has demonstrated that both *pi-ri-ta-wo* and *qe-ta-ko* filled multiple roles in the palatial administration and economy (Nakassis 2006, 518, 531). The former was a *te-re-ta* of Pakijane and the latter apparently was also a smith and a herder of sheep and pigs. Nakassis suggests that individuals like *pi-ri-ta-wo* and *qe-ta-ko* were economic “brokers” who served many different roles in both the palatial and the wider Messenian economy, and were variously rewarded (Nakassis 2006, 316, 321). It is not clear, however, whether they actually did the work attributed to them, or rather made sure it got done and that the finished goods were delivered; Nakassis argues generally for the latter, except in cases where an individual may perform a single job, like the “royal” potter (Nakassis 2006, 325). Given that one potter made all palatial fine wares and that fine wares filled an important role in palatial (*i.e.* “royal”) feasts, it seems likely that this potter was the so-called “royal” potter, *pi-ri-ta-wo*. He is thus unlike *qe-ta-ko*, who filled multiple economic roles, one of which was to make (presumably coarse) pottery, and was not similarly rewarded. *Pi-ri-ta-wo*’s importance to the palace’s political-economic goals is marked by his title, but also by his position as *te-re-ta* and his land grant. Moreover, since Fabric 2 pottery is found at sites throughout the kingdom, his economic influence is not merely local to Pylos, but is realized on a regional scale. In this way, the differential value of fine and coarse pottery is transferred to its makers, and vice versa.

In *Nestor’s Wine Cups* I argued that the power of the Mycenaean palatial elite stemmed in part from their control of prestige goods in strongly networked states (Galaty 1999, based on Blanton *et al.* 1996). Prestige goods were deployed in ways that reinforced elite status. Many of the elite whose names appear in the Linear B texts thereby participated in (in some cases, supervised) a “wealth-financed” economy. Additionally, I acknowledged that such a system is one-sided and inherently unstable, as described by D’Altroy and Earle (D’Altroy and Earle 1985). For this reason, the Pylian state appeared to me to be undergoing a

transition at the time of its demise: palatial administrators reinforced their control of wealth (*i.e.*, status) production (*e.g.*, by centralizing it) at the same time they sought to extend political-economic control over traditionally staple (*i.e.*, utilitarian, domestic, local) products as well. If fine wares are equated symbolically with “wealth” and coarse wares with “staple” goods, then the differential importance of *pi-ri-ta-wo* and *qe-ta-ko* makes sense. The objects *pi-ri-ta-wo* made and distributed – fine ware (kaolinite) pots such as kylikes – were key instruments in the palace’s efforts to reinforce social distinctions, as did Lozi pottery, and yet more fully integrate the various regional social components of the state, *e.g.*, through feasting. The objects made by *qe-ta-ko* were important tools, needed by and available to all members of Mycenaean society. For this reason *qe-ta-ko*’s activity drew together the two sectors of the economy in ways that *pi-ri-ta-wo*’s did not. Furthermore, when a potter like *qe-ta-ko* made, and a low-status individual used, a kylix made from illite, it could function like a Baringo spear, to disrupt authority. Bendall provides a fantastic example of this from LH IIIB Malthi (located at the far northern end of the Pylos polity): coarse red kylikes had been slipped yellow, making them look like fine ware (Bendall 2004, 124).

Such “disruptions of authority” appear to have occurred on a wider, regional scale as well. As described above, Koukounara eschewed pots of fine ware Fabric 2, made and distributed by *pi-ri-ta-wo* as an agent of the palace, in favor of a less widely available coarse ware, Fabric 1b. We know very little about Koukounara and have no good data about the size of the settlement(s) there. It may have been a district capital, perhaps *ro-u-so*. There are at least seven tholoi and an “apsidal” megaron (McDonald and Rapp 1972, 270–271). Clearly it was an important place. The dates of occupation are unclear, however, and the tombs appear to have gone out of use before LH III, so the site may have been “demoted” as were many of the palace’s other rivals (in Bennet and Shelmerdine’s (2001) terms). This being the case, there are two equally intriguing possible explanations for the absence of kaolinite pottery at Koukounara. On the one hand, it may be that in the LH IIIB Koukounara remained a rival and threat to the palace and as a result did not receive shipments of palatial pottery. Perhaps the site was, in Wright’s terms, a “peripheral,” as opposed to a “dependent,” participant in the palace economy (Wright 2004c, 127). Those sites that were “promoted” during LH III, and were by definition “dependent” on the palace, such as Ordines and Beylerbei, received larger amounts of fine ware Fabric 2. On the other hand, it may be that Koukounara refused to be drawn into very new systems of ceramic exchange, which were clearly “politically charged” (as described by Knappett 2001), and preferred to acquire pottery via a traditional, localized system of coarse ware exchange. If so, they, too, used pottery like a Baringo spear: to stick it to *pi-ri-ta-wo* and the palatial elite he represented.

Pylos in Regional Context

Given what we know about the organization of the Messenian ceramic system, we might ask to what degree it is similar to other Late Bronze Age ceramic systems in other parts of the Aegean. Were scales of production and distribution in other Aegean states of similar size? To what degree were palaces in other Mycenaean and Minoan states involved in pottery production and distribution? Were pots consumed in similar contexts for similar political and economic reasons?

New data from the Argolid and elsewhere in Greece now confirm that relatively decentralized, workshop production of pottery was probably the norm in Mycenaean states.

Through NAA analysis of 1750 samples, researchers at the University of Bonn have identified 80+ chemical groups, of which eight have been tied to specific production places (Hein *et al.* 2002b; Mommsen *et al.* 2001, 346; Mommsen *et al.* 2002). Pots in these groups are typically not found on a single site, rather they are found at multiple sites in a single region. The so-called “MB” (Mycenae-Berati) chemical group – the largest, most dominant compositional group in the Bonn database – found at sites throughout the Argolid, and beyond, can be associated with the workshops at Petsas House at Mycenae (see Shelton, this volume) and at Mastos in the Berbati Valley (Buxeda i Garrigós *et al.* 2002; Hein *et al.* 2002a, 177; Mommsen *et al.* 2001, 347; Mommsen *et al.* 2003; Mommsen and Maran 2000–2001), which shared a common clay source (K. Shelton, personal communication 2007).

Shelton describes in this volume a sophisticated pottery workshop at Petsas House that was destroyed, perhaps by earthquake, at the end of LH IIIA. The Petsas potter (or potters) used several different clays to produce a wide variety of decorated and undecorated types, including kylikes, and Shelton describes Petsas as a “cottage industry” on its way to being absorbed into the palatial economy. The situation at Petsas in LH IIIA can be compared to Mastos in LH IIIB.

Wright has argued that Berbati was a dependent of Mycenae during LH III (Wright 2004c, 127). The valley may have provided agricultural goods to the palace, but it is likely that the workshop at Mastos provided pottery as well. Åkerström describes a long-lived workshop at Mastos, founded in the Middle Helladic and abandoned late in LH IIIB (Åkerström 1968). At the end of LH IIIA, the rather modest Early Mycenaean workshop was transformed into a much larger establishment, with a tiled roof and ritual installations (Åkerström 1968, 50). It is difficult not to associate the growth of the Mastos workshop with connections (of dependency?) to Mycenae. In fact, it may be that the disappearance of Petsas cleared the way for the expansion of the pottery workshop at Mastos. Given the monumental character of the LH IIIB structure and its ritual installations, Mycenae’s elite were perhaps directly involved in the LH IIIB pottery industry centered at Mastos. What had been a “cottage industry” at Petsas was elite business at Mastos, and the Mastos potter may have filled the role of “royal” potter as did *pi-ri-ta-wo* at Pylos. In fact, a potter is mentioned on tablet Oe 125 from the House of the Oil Merchant (Palaima 1997, 410) and tablet Ue 611 from the House of Sphinxes records a long list of ordered or recently delivered pottery (Whitelaw 2001, 72). Additionally, the Mastos workshop produced pictorial kraters for international export, primarily to Cyprus (Åkerström 1968, 51). Again, it is difficult not to implicate the palatial elite at Mycenae in this trade, since they were the ones in a position to undertake trade with the East.

When compared, the scales of production in Mycenae-Berati and Messenia are quite similar. Scales of distribution, however, are strikingly different. The MB group is found, literally, all over the Eastern Mediterranean (Mommsen *et al.* 2001, 347). Pictorial kraters from this group have been found, for example, on Cyprus and in the Levant (Mommsen *et al.* 2001, 347; Mommsen and Maran 2000–2001). Pictorial kraters were not made, it seems, in Pylos, nor was Pylos pottery exported (Whitelaw 2001, 61).⁹ Like pictorial kraters, stirrup jars from Mycenae, presumably filled with oil, were shipped east in large numbers (Whitelaw 2001, 60). Messenian stirrup jars are almost never found outside of Messenia and, unlike Mycenae, they are deposited primarily in mortuary as opposed to domestic contexts (Whitelaw 2001, 60).

Potters, such as the Mastos potter(s), who worked for the LH IIIB Mycenaean elite (whether “royal” or otherwise) provided certain vessel types that were used and valued

differently than those produced by the Messenian potters. Pictorial kraters were valued as prestige goods in their own right and stirrup jars were valued for their association with oils manufactured for international export. The political-economic value of these vessels was realized directly by the elite who owned them. The pots, such as kylikes, made by *pi-ri-ta-wo* and *qe-ta-ko* for the palace at Pylos served completely different political-economic roles, tied to practices of social etiquette, such as feasting. Thus they could be manipulated symbolically, like Baringo spears, as tools of “resistance” (cf. Wright 2004b, 90). Pictorial kraters and stirrup jars could not function like a Baringo spear; they were like Lozi pottery, designed to mark and enhance status differences, pure and simple. This does not mean that Mycenae did not sponsor public feasts; they did, though the archaeological and Linear B evidence for feasting at Pylos is greater and has been much more intensively analyzed and reported. What does seem to be the case is that the political-economies at Pylos and Mycenae were different, at least as far as the deployment of some types of pottery goes.

What of the situation on Crete? Research by Day and Wilson indicates that during the Protopalatial period fine pottery, such as Kamares ware, was not manufactured exclusively at Knossos and Phaistos, as had been assumed (Day and Wilson 1998). Rather, Kamares pots were made elsewhere and imported by both Knossos and Phaistos. Kamares ware was almost certainly used during drinking/feasting ceremonies, in imitation of metal vessels, and is thought to have been a marker of high status. As a result, it had been assumed that production and distribution of Kamares pots was controlled by palatial elite. Analysis of Prepalatial pottery indicates, however, that decentralized workshop production and exchange of pottery preceded the appearance of the palaces (Day *et al.* 1997; see also Day, Relaki, and Todaro, this volume), and so the idea of palatial control of Kamares ware can be questioned. Moreover, it seems likely that workshops established in Early Minoan times continued to produce pottery in Middle Minoan times (and in some cases through the Neopalatial), and supplied pottery, including Kamares pottery, to the first palaces (Day and Wilson 1998, 355). Much of the fine pottery consumed at Knossos, for example, appears to have come from well-established workshops located to the south near the Mesara Plain (Day and Wilson 1998, 356).

Though there is no documentary evidence to this effect, we might wonder whether a “royal” potter, living and working somewhere in south-central Crete, supplied the elite of both Phaistos and Knossos. The similarities between Kamares ware and fine Pylian pottery are readily apparent: both were produced at a single workshop and consumed at palaces in similar political-economic contexts, for purposes of status differentiation. However, Kamares ware was very carefully made and painted, not mass-produced in sloppy fashion as were the pots at Pylos. Like pictorial kraters, Kamares ware was exported, whereas Messenian pottery was not. So, was the Messenian ceramic system more similar to LH IIIB Mycenae or Protopalatial Crete? A brief diachronic look at Minoan ceramic systems can help to answer this question.

During the Prepalatial, plain pottery, such as conical cups and poorly decorated juglets, was used in communal rituals that emphasized corporate identity (Borgna 2004, 139). As described above, during the Protopalatial status differences were marked by control and use of certain kinds of pottery, like Kamares ware, in certain contexts, but the bulk of individuals still would have employed plain pottery. Borgna has argued that two different feasting traditions were in operation in Crete at the same time from Proto- to Postpalatial times (Borgna 2004, 137–139). Whereas one type of feast was small-scale and served to reinforce elite identity, and encouraged production and consumption of prestige “drinking sets,” both metal and ceramic, the other type was large-scale, public, and promoted a

shared, corporate identity. Public, communal rituals encouraged mass production of plain pottery. In Postpalatial Crete, exclusive feasting practices became more pronounced, perhaps due to Mycenaean influence and at the expense of the formerly common communal feasts (Borgna 2004, 142–143).

Recently, Parkinson and I have argued that Minoan and Mycenaean states followed different trajectories of state formation. The Minoan states emphasized more corporate, heterarchical strategies, whereas the Mycenaean states were networked and hierarchical (Parkinson and Galaty 2007). Corporate states are much more likely to develop and emphasize staple systems of finance, whereas networked states typically rely on wealth finance (Blanton *et al.* 1996). When the ceramic systems of Pylos, Mycenae, and Minoan Crete are compared, and when political-economic contexts of production, distribution, and consumption are considered, it is clear that whereas Mycenae had effectively implemented systems of wealth (and perhaps staple) finance, probably during the Early Mycenaean period, perhaps by force, Pylos had not. This is because Pylos had formed an integrated state only a short 50–100 years prior to the collapse of the system.¹⁰ The palatial administrators at Pylos were dealing with political-economic problems those at Mycenae had solved, and those on Crete never faced. Whereas at first the Minoans emphasized corporate identity and systems of staple finance, through time there was a movement towards wealth finance, marked by the slow introduction of exclusive feasting rituals and increased status differentiation.

In Mycenae, the Baringo spear had been taken forcibly from the people well before LH IIIB. On Crete it had been removed from their hands gradually, by stealth. In LH IIIB Pylos, the spear might still be brandished.

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Notes

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- Clay minerals were identified by x-ray diffraction; see Galaty 1999, 35.

The potter I visited was one of the potters interviewed by F. Matson in 1963; see Matson 1972.

The Ano Englianos kaolinite went from Munsell 5GY 6/1 greenish grey when raw, to 7.5YR 7/4 pink at 700 and 900 degrees C, to 10YR 7/4 very pale brown at 1100 degrees C.

The data I have are, unfortunately, too rough to address this issue directly and conclusively; nonetheless I suspect that the domestic mode of pottery production did not exist to any great degree in LH III Messenia.

Here I employ an expansive definition of value that recognizes the symbolic worth of

- products (see Simmel 1978). This can be contrasted to the more narrow, utilitarian definition of value employed by (many, not all) archaeologists that lends primacy to economic calculations of worth, such as labor investment. As Voutsaki (1997, 36) demonstrates, value in prehistoric systems of exchange, such as that of the Mycenaeans, rested on “broad standards” of substitution, based on such subjective measures as object history (see also Voutsaki, this volume).
 6 See Bendall 2004 for a similar argument. Hruby (2006, 60, 69, 70, 117–122) makes the interesting argument that many if not most feasts were held at sites remote from the palace and that much of the pottery stored at the palace had been bound together as though prepared for transport elsewhere.
 7 Bendall (2004, 115) argues that the kylikes stored in room 9 were used to serve wine to individuals waiting (in room 3) to be received by the wanax in the main megaron.
 8 It should be noted that Hruby studied pottery from rooms 18–22 only, not from the whole palace. The results of my research, however, applied to fine pottery from various rooms at the palace and from surface survey, would seem to indicate that all fine wares at the palace, including those from rooms 18–22, were made at a single workshop, if not by a single potter.
 9 The data compiled by Parkinson in this volume demonstrate that LH IIIB Pylos did not engage in extra-regional trade, of pottery or any other product, at anywhere near the levels evident at Mycenae.
 10 Voutsaki argues in this volume that the process of political integration in the Argive region had begun as early as MBA and was largely accomplished by the beginning of the LBA.

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POLITICAL ECONOMIES IN THE AEGEAN BRONZE AGE: A RESPONSE

James C. Wright

"[General] theory would be almost without content, for we always pay for generality by sacrificing content, and all we can say about practically everything is almost nothing."
Kenneth E. Boulding (1956, 197).

Archaic States: Pristine and Secondary

Serious archaeological consideration of the nature and formation of political economies in the prehistoric Aegean may be said to have begun with the 1972 appearance of Renfrew's, *Emergence of Civilisation* (Renfrew 1972). At that time there was no systematic attempt to model the data within a theoretical framework. The research it spawned and its durability attest to the strength of Renfrew's project, as recent appreciations demonstrate (Barrett and Halstead 2004; Cherry, *et al.* 2004). Today there stands in contrast Broodbank's 2000 publication of *An Island Archaeology of the Cyclades* (Broodbank 2000), which is radically different in its approach, yet still dependent upon models for driving its analysis. Whereas Renfrew's study largely drew from the biological systems thinking that drove much of the neoevolutionary processualist mentality of the New Archaeology of its era, Broodbank's work is much more a product of what may fairly be described as a post-modern appreciation of how humans inhabit their localities and experience space and time (Harvey 1989, 209–239). Thus, whereas Renfrew was primarily interested in the *emergence* and *evolution* of civilization, Broodbank focuses on the *modes* and *durability* of inhabitation of a particular geographic setting, delimited by him as "an island archaeology." One might object that the latter work is less ambitious with its focus on the Cyclades in the third millennium than the former's more catholic concern with comparative study of the Aegean as a civilization, but that would miss the change in approach marked by Broodbank's study, which, though not unconcerned with the emergence of centralized and state level political economies, is more interested in how humans view, utilize, and transform the nature of life in an insular geography under different sociopolitical and economic conditions. In large part this is a result of Broodbank's appreciation of the historical evidence for the episodic nature of human settlement and use of the Cyclades, which might equally signal a lack of faith in the linear trajectory of civilizing processes.

It is hardly modesty that prevents Broodbank from claiming his approach as a new direction for assessing how political economies operate in the pre- and protohistoric Aegean; in fact his subsequent study of "Minoanisation" suggests he has a program and that he is eager to debunk the monolithic and antipodal approach to explaining the rise and dominance of strong polities in the Aegean (Broodbank 2004). In so doing he is rejecting the large-scale models that dominated the anthropological and archaeological debate about "the rise of civilization" (Redman 1978) during the 19th and 20th centuries in favor of one of "small worlds" (Broodbank 1995; Horden and Purcell 2000, 89–102). This preference for studying "small worlds" was made without polemic, but it runs against the grain of a long

line of research that privileged the search for “pristine” societies in the archaeological record and therefore favored the study of archaic states and empires, especially from a comparative perspective (Fried 1967, 231–235, 240–242; Adams 1966; Service 1975, Sabloff and Lamberg-Karlovsky 1975; Feinman and Marcus 1998; Renfrew 1986, 6). Aegeanists have largely ignored the latter approach and equally have been ignored by its proponents, despite Renfrew’s close ties to many of its advocates. In large part this is a consequence of Aegeanist indifference to theory and comparative studies, but also because of a lack of acquaintance with the terms of the debate as defined by social scientists. This is evident in any perusal of the proceedings of conferences during the 80’s and 90’s that concern Aegean prehistory. Few scholars showed engagement or familiarity with the comparativist social science scholarship on the rise of civilization; indeed, as B. Foster (1987) complained, few even took notice of the obviously important developments in the Near East.

At the same time social scientists have been notoriously uninterested in the phenomenon of the formation of “secondary” political economies, such that some fine early scholarship on the subject has been much ignored (*e.g.*, Price 1978). The consequence of this disregard has been their omission of most of the early polities of the entire Mediterranean region and much of the Near East during the periods from the 4th–1st millennia BC from the theoretical debate about the rise of early states (*e.g.* the various case studies in Griffeth and Thomas 1981; Nichols and Charlton 1997 and Hansen 2000a). Surely such a lacuna has consequences for any study of past political economies, let alone one that claims to be comparative. It leads away from the purpose of systems thinking for it promotes what Boulding termed “specialized deafness,” when the purpose of systems thinking in the first place was to develop “generalized ears” for hearing all varieties of information (Boulding 1956, 199).

This is surely the point of the appearance of the paper in *American Anthropologist* by Parkinson and Galaty entitled “Secondary States in Perspective” (Parkinson and Galaty 2007). In it they forcefully advocate to their anthropological colleagues the value of considering secondary states and focus on two key elements of these polities: “(1) the structure of local social systems prior to and during state formation and (2) the degree and type of interaction between the nascent state and its neighbors” (Parkinson and Galaty 2007, 114). They propose that their “integrative model” is equally valid as such current models as Marcus’ “Dynamic State Model” (Marcus 1993, 1998), Blanton and colleagues’ “Dual-Processual Model” (Blanton *et al.* 1996) and various adaptations of Wallerstein’s World Systems Theory (Wallerstein 1974; Algaze 1993; Sherratt 1993; Kardulias 1999)—all of which in one way or another they find inadequate for dealing with secondary states. Parkinson and Galaty respectfully draw attention to the importance of the concept of the city-state for understanding their Aegean examples, and believe the city-state concept needs be examined on the basis of “local processes of social organization” that have an impact on how emerging centers develop the structure of their power, especially in terms of how they interact with and borrow from large and more complexly structured neighbors.

The archaeological school to which Parkinson and Galaty have directed much of their attention is skeptical of the city-state as a form of political economy and of its value as object of study (Marcus 1989, 201; 1993; Yoffee 1997, 257). But its importance is widely agreed upon by scholars working in such different areas as Mexico, Central America, South Asia, the Mediterranean, and Southeast Asia—as case studies in Nichols and Charlton (1997) and Hansen (2000a) demonstrate. Discussion of the concept of the city-state culture in historical perspective opens up a wide avenue for further comparative study and

especially for consideration of this form of political economy as it developed and spread over the Mediterranean basin from the 2nd through the 1st millennia BC. Scholars of the pre- and protohistoric Aegean should focus their efforts on examining how the early polities in the Aegean fit into this concept and how they compare with similar polities in the Eastern Mediterranean. A starting point is Morris's illuminating discussion of ancient Greek city-states as properly studied on a continuum from the highly stratified agro-literate state to the weakly stratified and highly egalitarian *demokratia* of ancient Athens (Morris 1997). But an enlarged perspective can be gained from M. Iacovou's brilliant and subtle arguments in several papers regarding the origins of the Greek-speaking city-states headed by *basilei* in Iron Age Cyprus, or a perusal of emerging scholarship on the transition from the LBA to the IA in Syria Palestine (Iacovou 2005, 2006, 2007, 2008; Bunimovitz and Lederman 2008)

The Microstate and the City-State Concept

Explicit study of the city-state and microstate concepts heretofore has not been undertaken for the prehistoric societies of the Aegean. Hansen, in his handbook on the *polis*, briefly considers the issue within the context of a strict definition of the *polis* and finds the prehistoric Aegean states wanting (Hansen 2006, 41). But his reasons are unduly restricted, tied as they are to the question of political-cultural continuity from the Bronze through the Iron Ages. From the perspective of his concept of city-state cultures, however, it is immediately recognizable that the polity formations of Crete during the "Minoan" period and Greece during the "Mycenaean" period represent a form of city-state better termed microstates that in many ways resemble the later *poleis* and *ethne* that flourished in the Black Sea, along the Aegean coasts, on the Mainland of Greece and in Crete, throughout much of the Italian peninsula, in Sicily, along the North African coast, and from the mouth of the Rhône down the east coast of Spain (compare discussions in Horden and Purcell; Knapp's plea for a prehistoric version of *The Corrupting Sea* [Knapp 2001], and the recent study of the *polis* by Vlassopoulos 2007). For Crete the work of John Bennet has already demonstrated many of the similarities in political geographic terms (Bennet 1985, 1990), and the issue was broached in Cherry's contribution to the 1986 volume on peer polities, which grew out of Renfrew's earlier formulation of the Early State Module (Renfrew 1975; Cherry 1986). In 1997 Bintliff offered an insightful diachronic study that models core-periphery developments over the *longue durée* to show in a "core-periphery inversion" that in the Aegean the turn from the Neolithic to the Early Bronze Age marked a radical change away from the long-term sedentary agro-pastoral communities that obtained in much of Central and Northern Greece toward the smaller, short-term form of craft-based and exchange oriented communities that flourished in the more arid Aegean archipelago and throughout Southern Greece (Bintliff 1997, 24–33). This is an important study in the context of consideration of the formation of microstates and city-states in the Aegean, as it presents the evidence for understanding many of the underlying mechanisms of this form of polity, considers factors that link prehistoric polity formation with those of the historic period, and examines their success in what on the face of it were originally peripheral localities. Bintliff's focus is on the problem of the change in the distribution of power from the core regions of classical Greece in the SE (Athens, Corinth, Sparta) to the plains and mountains of northern and western Greece during the period of Philip II, Alexander and his successors. But he determines this problem in relation to the long-term dynamics of settlement duration and form of polity from the Neolithic through the Bronze Ages, when he identifies what he terms the "proto-polis" formations that we normally refer to as the

Minoan and Mycenaean palace-based societies. (Bintliff 1997, 26). Bintliff's diachronic study with its attention to a variety of factors, historical detail, and ecological variation is in contrast to Marcus' over determined and over simplified attempt to fit early Aegean states into her "dynamic model" (Marcus 1998).

In the papers delivered at this conference no one takes on the issue of the rise of these microstates head on, although it is surely the central topic of D. Haggis' contribution, which he delivered but does not publish here. He offered sharp and useful criticism of the models of Marcus, Blanton and colleagues while praising Galaty and Parkinson for pointing to the importance of secondary states. Following their plea, Haggis emphasized the importance of the "cognitive restructuring" necessary for polity formation, which he believes involves a "transference" from one form of political economy to another. He cites his work on the Cretan Iron Age settlement at Azoria as an example where the archaeological evidence shows how this restructuring took place through an effacing of the remains of the Early Iron Age settlement while newly structured social practices took place in buildings constructed atop those remains and thereby offer the nascent but constituent elements of the new institutions (*prytany*, *boulē*, *syssitia*) at the core of the *polis*. This is a particularly interesting example to which Aegean prehistorians and classical archaeologists should be paying close attention, as the archaeological evidence for the formation of Archaic *poleis* and *ethne* is not well enough known and remains a subject of dispute (Malkin 1987, 12, *passim*; Morgan 2003; Morris 1987, 171–210; de Polignac 2005; Foxhall 2005).

This is not to imply that the emergence of city-state urbanism in the 8th and 7th centuries BC is a model for Aegeanists to use for explaining second millennium urbanism. De Polignac's studies of *polis* formation make it clear how dangerous it is to apply later political forms to interpret earlier ones (de Polignac 2005, 45–59, 1995); nevertheless there are important lessons to be learned from attention to the recent scholarship on Mediterranean urbanism. Osborne has pointed out that the literature on state formation and the rise of urbanism has been compromised by the tendency to confound two phenomena in the service of an evolutionary model for the origins of the state, while in the dismantling of this model, urbanism has fallen out of favor as an analytical concept (Osborne 2005, 2–3). Yet it is precisely the success and dispersal of urban culture across the Mediterranean during the Archaic period that should lead us to examine the conditions that favor the growth of microstates (always, of course, secondary states) as a way of analyzing their appearance during the second millennium BC. V. G. Childe's 1950 definition of the "urban revolution" is a way to begin thinking about the results of these conditions (Childe 1950), though it is not to be mistaken as an explanation of its origin (Osborne 2005, 6). Hansen, who works from Weber's insightful analysis of urbanism and his study of ancient economies, draws a definition of the city-state culture from his comparison of the thirty archaeologically and historically known societies studied as a part of the Copenhagen Center's researches (Hansen 2000b, 16–19). The definition is worth our attention as it focuses on the conditions for the emergence of microstates. These are coherent territories of small to moderate size suitable for supporting populations that nucleate around a single urban center but rely upon commercial enterprise that is driven by homogeneous native populations that are also open to outsiders and which are bound to other polities in a dynamic network of social relations (see also Horden and Purcell 2000, 123 *passim*). Hansen argues that this definition of the city-state is broadly applicable in cross-cultural and diachronic perspective when considered as a cultural form, what he terms the "city-state culture." One value of this perspective is that it removes the charge of essentialism often leveled against the city-state as embodiment of the *polis* and usefully promotes the city-state

and city-state culture concepts as prime examples of what Morton Fried dubbed the “secondary state” (Fried 1967; for a thorough critique of the *polis* concept in modern scholarship see Vlassopoulos 2007).

I wish to return to the problem of confusing urbanism with state formation. As much as the city-state culture concept is appealing and has broad historical relevance, it is based on a misleading notion of urbanism as being the necessary core feature. In the publication of a conference on urbanism in the Aegean Bronze Age (Branigan 2001a), with the exception of a contribution by Cherry and Davis (2001, 141), urbanism is tacitly accepted as the mode of enquiry with neither definition nor critical analysis of what is meant by urbanism; urban centers are postulated on the basis of size, population and density (Whitelaw 2001a; Branigan 2001b); and towns are frequently evoked as descriptive of the penumbra of palace-centered urban forms or secondary centers within a hierarchy of settlement sizes (Driessen 2001; Cunningham 2001; Cavanagh 2001; Bennet and Shelmerdine 2001). In part we accept urbanism as a condition of state formation because it was so prefigured by Childe (1950) and seems, on the basis of our own experience, as the natural order of states (see also Osborne 2005, 5–8), even though recent studies, such as Fleming’s examination of relevant documents in the Mari archives, have shown otherwise (Fleming 2004, 106–114). A particularly apt and insightful study is Iacovou’s examination of Iron Age polities on Cyprus (2007, see also Iacovou 2005) in which she debunks generalizing estimates of urban size in favor of site structure evaluated on the basis of individual cases. She concludes that there are multiple trajectories towards “statehood” within Iron Age Cyprus and that they have long histories, extending back in to the Late Bronze Age. Gary Feinman argues that it is futile merely to set quantitative standards to assess what constitutes urban or state; he summarized evidence to show that it is characteristic for states to cycle in size and extent, and usefully argued that scale and complexity depend upon how social groups are integrated and the nature of that integration (Feinman 1998, 104–112). Just as scholars have argued that the chiefdom is hardly a necessary component in the formation of states (Yoffee 1993; Morris 1997, 92–94), so it is time to acknowledge that “states” can exist whenever communities or associations (Aristotle’s term is *koinonai*) join together politically (Vlassopoulos 2007, 86–96, *passim*). This can result in a variety of different forms of political structure that are not what neoevolutionary theory predicts (Morris 1997, 98–100; Vlassopoulos 2007, 147–155) but which vary from stratified to egalitarian, from urban to rural, and from formal abstractions to embedded socially determined ones. We are challenged in discussing the political economies of the Aegean Bronze Age to think about them in ways that are not bound by theoretical constructs and the usual paradigm of discourse, but rather that, as Broodbank has exemplified, are appropriate to the circumstances of the areas we study. The following discussion will try to assess how this conference succeeds in this (admittedly post-facto) goal.

The Form of Aegean Political Economies

So what is there to say about secondary states? I think the question needs be reframed so that the focus is not on secondary states *per se*. Our business is not to continue to find ways to fit models and theories into the tired cul de sac of post-processualist and neoevolutionist redressing of general theory (see Boulding’s [1956, 204–207] admonitions about its limitations and Morris’ critique [1997, 91–100]), but rather to understand the societies of the past that we study within the archaeological-historical context of their times using modern theoretical approaches that provide insight into them. Further, the term “secondary

state” explicitly requires dependence upon a primary state—a tenet of state formation study since Fried (1967, 231–235)—but this has become an elitist notion of origins that beggars the study of state formation, since the pristine is vanishingly elusive while the “secondary” state is universally the most abundant form that we have to study and represents a vast continuum from prehistory to the present. So the question is not about “secondary” as a component of “primary” (or “Archaic,” [*sensu* Yoffee 2005] or “pristine”) but rather on the nature of the small worlds or microstates of the Aegean and also their relation to and relevance in the wider frame of the ancient Near East and Mediterranean.

Throughout these papers there is abundant evidence that this is precisely what Aegeanists are doing, although they remain liable to the charge of not taking adequate time to notice what they are doing within the wider discourse of scholarship and theory about the nature of political economies and their social nature. In this conference, however, many of the papers are couched in terms of widely used theoretical models and deserve attention for their application in specific and substantive case studies. Thus Parkinson’s study of exchange advances discussion because it moves beyond simplistic quantitative and distributional documentation of artifacts to a more elegant examination conditioned by the notion of “minimum number of contacts” (cf., to the osteologist’s “minimum number of individuals”) that leads to an insightful comparative discussion of Mycenaean mainland to Minoan Crete on one hand and of Messenia to other Mycenaean regions on the other. Nakassis’ discussion of wealth versus staple finance is a theoretically and critically informed approach that, because of his substantive examination of the textual evidence, advances understanding of the historical situation in the kingdom of Pylos (at least), and also heightens awareness of the need for careful, considered testing of theory with data. Driessen’s deep reading into social archaeology, especially work by S. Gillespie and R. Joyce (Gillespie 2000a, 2000b; Joyce 2000), leads to a much richer appreciation of the social fabric of Cretan society focused on the notion of “houses” as “corporate bodies ... organized by their shared residence, subsistence, means of production, origin, ritual actions, or metaphysical essence... which materialize the social group” (Driessen, this volume). The analyses of the consumption of high status items by Voutsaki and Parkinson in their contributions lead to a more subtle appreciation of the roles of individuals in social groups. These and other papers presented here demonstrate a robust use of theory in Aegean prehistoric studies, and it is pertinent that in different ways they succeed by focusing on data that lead to a deep and richly textured understanding of these small scale societies.

Most all of the authors of these papers explicitly acknowledge that the subject of Aegeanists’ enquiry is the small-scale political unit, however defined. So far I have indicated that the small-scale political unit is the microstate or city-state or a small world. But its analytical value is only useful on a macro scale if its constituent structure is also appreciated, otherwise we are left with only individuals, nuclear families, kin groups, clans, *etc.* as prospective agents (for which see Fleming 2004). Driessen makes a major point by using the house as an analytical unit, which obviates the need to determine specific social forms because he argues, following Gillespie (2000a, 1–2; 2000b; Joyce 2000, 190–194), that the house as a unit incorporates different social forms of affiliation without losing its value as a primary locus and forum of social, economic, political, and religious activities. What he shows from Crete is the probable continuity of the house from the Neolithic through the LBA, with the emergence during the Protopalatial Period of “established houses” and in the Neopalatial of “noble houses.” Perhaps one could speak of a “house mode of production” instead of a “domestic mode of production” (Sahlins 1972).

Tartaron and Schoep (this volume) base their respective examinations on the mainland

of Greece and on Crete on approaches that pay attention to local conditions and contiguous neighbors, whether formal territories or merely resident populations. They also both orient their studies to the settings and conditions that led to territorial consolidation and the emergence of more centralized polities. In different yet complementary ways both argue that there were multiple agents working within and among related communities across a patchwork of familiar yet differing social, economic, and geographic landscapes and that their actions led to a mosaic of small constellations, some of which synergistically combined with others and resulted in larger communities over the variegated landscape. The success of those communities was equally variable depending upon their position with respect to their immediate landscapes (e.g. Tartaron's discussion of Kolonna on Aigina within the phenomenological presence of the Saronic Gulf; Schoep's contrast of coastal Malia with emergent centers in the Padiadha or Lasithi). Not achieving "statehood," as they both emphasize (and as already argued by Lewthwaite 1983), is a significant and important phenomenon in the study of the emergence of political economies in the Bronze Age Aegean. Studying this phenomenon and the dynamics of it is of vital significance because, as we learn from the lesson of emergent urbanism in the Archaic period of classical Greece, there are varying forms of communities that we recognize as having been autonomous, and not all were urban *poleis*; some were loose conurbations or *komai*; others were based on networks of aristocratic land-holders as *ethnē*. Some were small islands, others were extensive territories; many inhabited single valleys, others were synoicisms of previously autonomous communities. And, in the instance of Athens, Thebes, and Sparta, some were variously hegemonic, but never for long. The ebb and flow of these socio-political agglomerations carries within and upon their mosaic structure the continuous flow of goods and services that interconnect in ways that create commonalities, which when successfully reproduced over many iterations can result in civilization as defined by Baines and Yoffee (1998, and discussed here by Schoep). As such there is always the potential for contact and influence from the wider world beyond the Aegean basin, and this potential endures because it is effected through a resilient "small world system" that flourishes because of its connectivity, even as it may draw knowledge and inspiration from a "world system" of which it is a periphery.

What are the components of these small worlds that make them work? Several papers discuss this matter. In their presentation Day, Relaki and Todaro take on the topic of this conference by rethinking the EB-MB analyses they have previously made of pottery production and consumption in Crete. Questioning, as Nakassis does, the model of craft specialists co-opted by aggrandizing elites, they explore during this formative period on Crete the evidence for craft production and its relation to consumption practices. Standardization, they argue, is not the result of elite appropriation and centralization of production, but rather of the emergence of more homogeneous practices of consumption across the island. This brings them to the issue of feasting and its important and periodic role in creating demand and of homogenizing it, too. They argue that it would be difficult for elites as participants in these collective ceremonies (whether mortuary, social, economic, or religious) to manipulate them, and as evidence in support of this point out that production techniques in the Mesara are uniform in the periods before and after palace formation. Others have also pointed to this phenomenon in the structure of mortuary facilities and practices in the Mesara, and some time ago Dabney (Dabney and Wright 1990, 45–48) argued that this signaled not the formation of the state but on the contrary the durability of local landholding and residence and probably of the elite heads of households. This observation is strongly linked to several papers in this conference; the role of local elites is

for Schoep a primary determinant in the different trajectories of growing communities, while for Driessen, the role of elites as heads of “houses” makes the “house” a primary building block of Cretan society, serving as it does as a concentration of landholding, craft production, and labor into a durable and economically, as well as culturally, efficient component of the mosaic of small worlds. The conclusion I draw from this research is that small worlds are rarely so strongly centralized that the “state” becomes so superordinate as to completely subsume all other socio-political and socio-economic groups, in other words the profile is depressed rather than hierarchically conical: why else did Perikles argue in his *epitafios logos* for the ascendance of the *polis* over the family (Thucydides, II.4.34–42), or the playwrights repeatedly represent the conflict between duty to family and duty to state (Goldhill 1990; Zeitlin 1990)?

In small worlds the “state” *sensu strictu* is a fragile institution. This is in fact the conclusion of Voutsaki’s paper here. Discounting the differences in Cretan and Mainland social structure, I argue this perspective seems also to be applicable on the Mainland of Greece. Tartaron’s discussion of the Saronic Gulf and the Corinthia-Isthmus during the Middle through Late Bronze Ages follows Haggis’ lead in exploring the durability of heterarchical clusters of communities (Haggis 2002). Given the persistence of this pattern into the Archaic period (*e.g.*, in the region of Corinth and the Isthmus, Morgan 1994, 1999), there is good reason to reject the traditional view that places Mycenae in a position of dominance over this landscape. This was never successfully accomplished in historic times and is arguably only applicable during the acme of the palace period (earliest LH IIIA2 more likely IIIB1) in the Nemea and Phlius Valleys. Instead an argument of dynamic and interrelated small worlds constituting the political landscape of the Northeast Peloponnese makes more sense and is supported by modern history. Thus the modern town of New Nemea (Ayios Yioryios) is a major local agricultural center and before WW II was a “kefalochori” at the center of an important trade route between coastal Sikyon and the major market town of Argos; Ayios Yioryios was renowned as a center of craft producers (especially cobblers) and the regional focus for communities in the northeastern Arcadian mountains as well as the settlements in the circumambient valleys of this piedmont. In the classical period it housed the city state of Phlius, while in the valley to the east was the panhellenic Sanctuary of Zeus, and yet east again the *polis* of Kleonai. Tartaron bases part of his analysis of the Saronic Gulf region on the distribution of pottery, pointing out both local production and restricted and shifting imports, with Aigina playing a dominant role and relinquishing it only after the palace of Mycenae subordinates it, probably in a spurt of hegemony (max. 150 years) during LH IIIA2–IIIB. The situation is similar when we consider the ceramic evidence of the prehistoric and historic periods for this region (for prehistoric see Lambropoulou 1991 on fabrics in the Corinthia and Rutter 1993 and Lindblom 2001 for Aiginetan; for the historic period see, Morgan and Whitelaw 1991).

How did the elites at Mycenae accomplish this domination? In part it must have been through successful control of production and distribution, but that, as Day, Relaki and Todaro point out, was intimately connected with such social practices as feasting. Shelton’s discussion of the ongoing work at Petsas’ House is illuminating for a perspective of how the Mycenaean “state” was organized. It would of course be foolish to claim that the king of Mycenae directly controlled all production and distribution, but what is of interest is that these activities, although centered on the palace center, seem to be located within the *oikoi* of elites. How much, one wonders, was this form of organization an adaptation of the Neopalatial system of “villas,” which successfully preserved Driessen’s “houses” and Schoep’s local elites of the Protopalatial period in a more hierarchically administered polity

of the Late Bronze Age? Certainly, as happened in Neopalatial Crete, the architectural form and furnishing of these richly appointed buildings at Mycenae imitates those of the palaces, so much so that Darcque does not classify them in his category of “domestic” architecture (Darcque 2005, 657–666). Does this mean that the structure of Mycenaean polities was partly constituted of “houses” that, accepting possibly different kinship structures than on Crete, functioned similarly to those postulated by Driessen? Nakassis, in his dissertation and also tangentially in his paper at this conference, has considered the economic activities of many of the named persons in the Linear B tablets (Nakassis 2006, 518, 531, and this volume). He argues that many of them, men and women, acted in multiple capacities, for example as smiths and as supervisors of flocks and of potteries that led them also to work in different locales within the kingdom. Some of them were probably members of preexisting communities that were incorporated into the kingdom as it expanded (Lang 1988). Despite the seemingly hierarchical nature of the organization of offices and the organization of formal space in Mycenaean society, there was apparently much room for horizontal or heterarchical forms of association. Nakassis’ convincing argument in his contribution to this volume against a system of wealth finance is an important component of such an interpretation; the system of staple finance, as D’Altroy and Earle emphasize, is especially suitable for small states (D’Altroy and Earle 1985, 188), and Nakassis’ introduction of the notion of ordinal ranking systems into the discussion is especially helpful in this regard. His attempt to quantify how a system of staple finance would work in the palace illuminates the economic importance, if not centrality, of feasting, since it effects virtually the entire populace in events that certainly were scheduled on a calendrical basis and served to support much of the population while at the same time bound it together through ever increasing social, ideological, and economic ties. One wonders if the feasting deposit at Tsoungiza, which Dabney, Halstead and Thomas (2004) argue is likely the result or sign of a special tie to Mycenae at the height of her power over her territory, is not directly related to the family that was responsible for the large (and identical) pottery stores at Petsas’ House. Did the Mycenaeans at Mycenae and at Pylos establish their control over territories through practices such as feasting that celebrated more than political ties, but also status relations or even ties of marriage? This is the same time (LH IIIA2–IIIB1) that chamber tombs begin to be widely employed in the territories on the Mainland, on Crete, and throughout the islands. I have argued elsewhere (Wright 2008) that the adoption of the chamber tomb by such communities is a sign of increasing orientation away from the traditional hamlet or village towards the more urbanized palace centers, and part of this process could also be the result of changing membership by successful local individuals who had been promoted to positions of significant status at the palace centers. Although this discussion is highly speculative it is important for us to focus on the dynamism of the relations between centralized centers and communities in their hinterlands, because from the perspective of the “hinterland” residents, who often have their own long history related to the region in which they are settled, the center is neither hegemonic nor the only source of cultural capital. This certainly is one of the lessons of Tartaron’s examination of the Corinthia-Isthmia corridor and its relationship to the Saronic Gulf.

This is precisely the conclusion Galaty draws from his insightful discussion of pottery manufacture in Messenia. The pottery most associated with the palace is that which uses kaolin and produces high quality wares, yet the illite-produced pottery located elsewhere in the kingdom reproduces the kaolinite tablewares used in feasting in the palace and across the kingdom. Its production and consumption indicates some degree of local control over the forces of production and consumption, represented in its imitation of the preferred

kaolinite forms of kylikes and other tableware (not unlike the tinned kylikes made to look like they were actually metal vessels: Gillis 1995, 1997). Significantly, on Galaty's analysis, the status differences between the production centers are reinforced by the presence in the palace pantries of illite wares, which are acquired only for use as utilitarian wares in those pantries that are associated by Bendall with locales of low-status feasting (Bendall 2004, 122–124; Carrington Smith 1999; Whitelaw 2001b, 58; Wright 1984, 23 – all cited by Galaty, this volume). The parallels between high quality Mycenae-produced (Petsas?) pottery used for a local feast at Tsoungiza and the coarse-red yellow-slipped imitation kylix from Malthi cited by Galaty describe both sides of a realm in flux: allegiance to the center on one hand, independence but imitation of it the other. If, however, Galaty's hypothesis about Iklaina as a promoted center is correct, these struggles were being resolved in the issuance of a ceramic "coinage" in the kaolinite fine ware, depicting the tension of these two sides joined together in obverse and reverse.

What holds these societies together? One of the truly useful aspects of Renfrew's notion of peer polity interaction is the recognition that early forms of contiguous and neighboring states could be peers and that from their interaction emerge homologous institutions across different polities. At a very general level this is a characteristic of the city-state culture, especially noteworthy among the polities of the ancient Mediterranean. Within, however, a sphere that develops a distinct civilization, there is a powerful process of cultural reproduction that leads to an overarching uniformity encompassing many different and autonomous polities. We characterize our second millennium examples of this as "Minoan" and "Mycenaean" and, aware as we must be that they may be largely products of our discourse, we would not give up on them as having some kind of reality in the past. How we talk about this result, however, has led to much confusion concerning the object of our attention, recognizable when we refer to "ancient Greece" (whether historic or prehistoric) as if it were a real object of study rather than the many communities that, through common language, common customs, and common religion, produced a distinct civilization (cf. Herodotus VIII.144; see the illuminating discussion by Vlassopoulos 2007, 38–67). On Crete it is commonplace in the study of its prehistoric societies to think of them as sharing language, customs and religion, not least because the material remains (from lowliest cup to most exalted palatial architecture) are widely shared across the island. On the Mainland of Greece and among the islands the same is true and there develops out of this interaction a Mycenaean *koiné* during the later phase of the Late Bronze Age that has even a presence in the Eastern Mediterranean (see Dabney [2007] for a novel analysis of how and why Mycenaean pottery is distributed so widely in the Levant). In this respect Murphy's interest in her paper in this volume in identifying "diagnostic" ritual events is an interesting avenue of study that reminds us how the worship of deities and the performance of social, political and economic rituals (all with a religious underpinning) utilize similar unifying symbols and acts that are the products of generations of practice. On Crete the very long history of "houses" and the accompanying history of elites interacting and intermarrying no doubt created a rich body of cultural practices that continuously reaffirmed the commonalities of being Cretan (cf. the comments of Day, Relaki and Todaro in their presentation at this conference about the homogenization of ceramic forms through such practices as communal feasting). How we specify these events, however, remains a challenge, since, despite a wealth of studies, e.g., Gesell's *Town, Palace, and House Cult in Minoan Crete* and Marinatos' *Minoan Religion*, religion is only sketchily understood (Gesell 1985; Marinatos 1993). The Mainland of Greece was no doubt more fractious, and Mycenaean origins, as alluded to by Tartaron, were much about access to Crete (through the islands, whether

Aigina and the Cyclades or Kythera; see Graziadio 1998). But apparently these mainlanders spoke a common language and, from our understanding of Middle Helladic ceramic production and consumption, had been in communication for a long time before the rise of the palaces. As on Crete feasting seems to have been an activity that promoted a sense of belonging to a community, and insofar as ritual feasting is an expression of religious belief, we may infer from the evidence of it taking place a process of creating homologous interpolity institutions and homogeneous patterns of consumption (Dietler 2001, 69–75). These practices, religious and otherwise, embrace and defuse contradictions, affirm order, legitimize power, and mobilize wealth. On the surface these were perhaps more important for the Mycenaeans than for the Minoans, since the apparently competitive nature of the Mycenaean elites seems more explicitly to be hierarchical, dividing between haves and have nots, and perhaps also more sharply distinguishing the Other in opposition than was the case on Crete.

We do not have difficulty distinguishing Mycenaean from Minoan, despite the obviously derivative nature of many Mycenaean institutions from their Minoan predecessors. This is also true in the sphere of external contact, for what routes and contacts were previously forged by Cretans are assumed by the Mainlanders, who surely accompanied Cretans on voyages in the early days of the LBA and thereby learned their way in the East. Both Ward and Parkinson in their presentations remind us of that. Parkinson puts his finger on the major issue about relations between the mosaic of Aegean polities and the external world by questioning the scale and frequency of the exchange. This is a large topic that requires attention to the problem just discussed of our view of the Aegean as a civilizing entity as opposed to a myriad of competing actors. Some would say that the former is not merely our view, but one of understanding how other political entities viewed the populations living in the Aegean—if Ahhiyawa, then who, what or which is Ahhiyawa? If Caphtor, then what did King Zimrilim of Mari understand to be Caphtor—the island of Crete or merely one of its palatial polities? And likewise for Keftiu and Amenhotep III's understanding of Aegean political geography with his stele's list of "Keftiu," "Tanaia," "Amnisos," "Phaistos," "Kydonia," "Mycenae," "Boeotian Thebes" or "Kato Zakros," "Methana" or "Messana," "Nauplion," "Kythera," "Ilios," "Knossos," and "Lykioi"? (Cline 1987, 1998; Edelman 1966). The Egyptians' knowledge of the Aegean aside, Parkinson's study suggests that access to the outside world differed from polity to polity, that for example the Kingdom of Pylos enjoyed much less access than did Mycenae. This surely had historic roots, which probably go back to the different access Messenia had to Crete in comparison to Mycenae (Rutter 2006; Broodbank, Kyriatzi, and Rutter 2005), especially if there was a special relationship between Mycenae and Akrotiri initially (Marthari 1998), and post-cataclysm a new special relationship between Mycenae and Knossos (Dickinson 1977, 1982). For our appreciation of how different political economies evolved and behaved, the lesson here surely has to do with recognizing the role of individuals and small groups in shaping the destiny of their communities.

So I end this appreciation where it began, with the different perceptions held by people with different perspectives. If the Hittite kings thought, not of individual polities and not of corresponding royalty, but merely of an ethnic labelled Ahhiyawa, then the small polities that they were made up of were hardly recognizable and certainly not worthy of much attention. So much the worse for the Hittite Great King, if, in not understanding these polities, he misjudged them and the damage they could do to his enterprise. "Timeo Danaos et dona ferentes," wrote Virgil (*Aeneid* II.49). In like vein for those interested in comparative political history, it is unwise to underestimate the microstates, for the pristine

is fleeting, only the beginning, and quite likely ineffable, whereas what is “secondary” is most everything when it comes to recovering and writing history.

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